THE OPINIONS OF LECTURERS AT A UNIVERSITY OF TECHNOLOGY REGARDING THEIR ROLE IN SUPPORTING STUDENTS EXPERIENCING BARRIERS TO LEARNING

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North-West University

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DECLARATION

I, Charlene Haywood, the undersigned, hereby declare that the work contained in this dissertation is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

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Signature Date

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SUMMARY

High retention rates, low levels of academic literacy and inundated support services show that students enrolled at Higher Education Institutions (HEIs) are experiencing difficulty coping with the demands of tertiary study and reaching their academic goals. Literature shows that a significant number of students who are attending HEIs experience barriers to learning, both intrinsic and extrinsic. The aim of this study was to determine the opinions of lecturers at one University of Technology regarding their role in supporting students experiencing barriers to learning. The researcher used a mixed methods approach to collect data with the aim to describe the phenomenon accurately. Bronfenbrenner's bio-ecological model provided a theoretical framework for this study as it emphasizes the importance of the interaction between the development of an individual and the systems within the individual's social context. A purposive sampling strategy was employed, and self-structured questionnaires were given to lecturers who teach first year to post-graduate students at the University of Technology. After the statistical analysis of the quantitative data, fifteen lecturers were randomly chosen to participate in individual semi-structured interviews. The transcriptions of the interviews were coded and themes were identified. Using the constant comparative method of data analysis, the researcher aimed to explain the results of quantitative data analysis. The key findings revealed that lecturers feel inadequate to deal with barriers to learning; mainly owing to a lack of training and that they are mainly of opinion that their duty is to refer students for support.

Keywords: lecturers, students, barriers to learning, support, Higher Education Institutions

OPSOMMING

Hoë retensiekoerse, lae akademiese geletterdheidsvlakke en oorbelaaide ondersteuningsdienste dui daarop dat ingeskrewe studente by Hoër Onderwys Instellings (HOI's) dit moeilik vind om die vereistes van tersiêre onderwys te hanteer en hul akademiese doelwitte te bereik. Literatuur bevestig dat 'n betekenisvolle aantal studente by HOI's hindernisse tot leer ervaar, intrinsiek sowal as ekstrinsiek. Die doel van die studie was om die opinies van dosente by 'n Universiteit van Tegnologie te bepaal ten opsigte van hulle rol in die ondersteuning van studente wat leerhindernisse ervaar. Die navorser het 'n gemengde navorsingsmetode benadering gebruik om data in te win ten einde die verskynsel akkuraat te beskryf. Bronfenbrenner se ekosistemiese model het die teoretiese raamwerk vir die studie gevorm omdat dit die belangrikheid van die wisselwerking tussen die ontwikkeling van die individu en die sisteme binne die individu se sosiale konteks beklemtoon. 'n Doelgerigte steekproef-metode is gebruik om self-gestruktureerde vraelyste aan dosente uit te deel wat eerstejaar tot nagraadse studente onderrig aan die Universiteit van Tegnologie. Na die statistiese analise van die kwantitatiewe data, is vyftien dosente ewekansig gekies om deel te neem aan individuele semi-gestruktureerde onderhoude. Kodering van die onderhoud-transkripsies het gelei tot die identifisering van temas. Deur van die konstante vergelykende metode van data-analise gebruik te maak, het die navorser gepoog om die resultate van die kwantitatiewe data analise te verduidelik. Die belangrikste bevindings dui aan dat dosente onbevoeg voel om hindernisse tot leer te hanteer, meestal weens 'n gebrek aan opleiding en as gevolg van die feit dat hulle voel dit is net hulle plig om studente te verwys vir ondersteuning.

Sleutelwoorde: dosente, studente, leerhindernisse, ondersteuning, Hoër Onderwys Instellings

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION AND RATIONALE

According to Education White Paper 6 (EWP6) (SA, 2001:6) inclusive education and training is defined as acknowledging that all children and youth can learn and that all children and youth need support. It is also about enabling education structures, systems and learning methodologies to meet the needs of all learners. The Oxford dictionary defines youth as “the period between childhood and adult age.” Based on this premise, it is fair to say that the principles for inclusive education and training as outlined in EWP 6, thus also apply to university students who are in their late adolescence / early adulthood phase. In EWP 6, the Ministry of Education expects Higher Education Institutions to increase the access of learners with disabilities and special education needs to higher education, and implement strategies and steps to increase enrolment of these learners (SA, 2001:31).

According to Reupert *et al. (*2010), the number of students with barriers to learning attending Higher Education Institutions is increasing. Such students are faced with a range of difficulties in accessing and participating in higher education courses (Hadjikakou & Hartas as referenced in Reupert *et al.,* 2010). In this study conducted in Australia, it was found that although there are potential levels of support such as student support services, effective referral processes and training for staff, numerous challenges still exist for students with a barrier to learning in Higher Education Institutions. These students reported a number of barriers, such as having to listen and take notes simultaneously in a lecture, a lack of understanding from lecturers and confusion about what is expected in assessments. In a study by Fuller *et al*. (2004) with self–reported disabled students in a single UK (United Kingdom) higher education institution, it was found that these students experienced similar problems such as lecturers talking too fast, or removing visual material such as overhead transparencies before the student had time to digest the content. Listening, watching and note-taking were especially difficult for these students, leaving them with dilemmas as to what to concentrate on, and consequently their note-taking does not help them much. In a study done on peer tutoring for college students in Israel, Vogel *et al.* (2007) state that

learning disabilities are lifelong, and students who experience these barriers face difficulties on university and college level. Students showed difficulties in the following areas: (a) a lack of study skills such as note-taking and listening; (b) problems with organizational skills; (c) difficulty socialising; (d) problems in certain academic areas with reading and writing skills being the most frequent; (e) low self-esteem and (f) high drop-out rates (Vogel *et al*., 2007).

Limited research has been done on the inclusion of students with barriers to learning in South African Higher Education Institutions. From the researcher's own experience in working with students at a university, there are many students who experience barriers to learning, such as learning, social and emotional problems, which could negatively influence their optimal learning and academic achievement. Although a support centre is in place at the university where the researcher is teaching, from the researcher's own experience it does not function adequately to meet the needs of all students who experience various barriers to learning. This could be due to factors such as a shortage of trained staff, the time that it takes to effectively help a student and the inability to cope with the volume of referrals. According to Matshedisho (2007), the support structure for students with disabilities in South African universities is situated within student services and even though a high number of institutions do provide support services for disabled students, the range of support seems to be limited to blindness, deafness and paraplegia.

However, support should not only be restricted to support services (Nel, 2013). Barriers to learning impact on teaching and learning in a classroom as well and therefore imply that the educator (lecturer) needs to have knowledge and skills to support students who experience barriers to learning. Yet, according to Matshedisho (2007), formal training for academic staff with regard to supporting students with barriers to learning appears to be insufficient since most institutions do not require it (Matshedisho, 2007).Thus, in general no formal training is given to academic staff to help students with barriers to learning as HEIs are not required to do so. During their research in South African tertiary institutions, Healy *et al.* (2011:24) found that support services to students in Higher Education Institutions tend to operate separately from or have limited collaboration with the broader teaching and learning initiatives in the institutions. EWP 6 requires that educators acknowledge, respect and accommodate students who experience barriers to learning (SA, 2001:16). Consequently, Higher Education

Institutions, and particular the staff at these institutions, have an important role to play in assisting these students so that they can learn and achieve academically.

A brief discussion on the appropriate use and understanding of terminology is essential before the rationale for this study is explained further. In many countries and publications, the phrases “special needs” and “disabilities” are still used; however, the new accepted term in South Africa is “barriers to learning” (SA, 2001). According to Howell (as referenced in Walton *et al.*, 2009:107) this term is preferable to “special needs” which signifies a medical or deficit approach to educational difficulties and locates the problem within the learner, rather than the system. Donald *et al.*(2006:3) define a barrier to learning as *“any factor that is a hindrance or obstacle to a student’s ability to learn*.” Barriers to learning may be best understood as resulting from a complex interplay of learners and their contexts, including the reality of impairments or disabilities, socio-economic restraints and wider societal factors including values, attitudes, policies and institutions (Walton *et al.,* 2009:3). The SIAS (Screening, Identification, Assessment and Support) strategy manual (SA, 2008:8) defines barriers to learning as difficulties that arise within the education system as a whole, the learning site and/or within the learner himself which complicate access to learning and development for learners. Barriers to learning may be intrinsic and extrinsic to learners. Intrinsic barriers to learning include physical, sensory, neurological and developmental impairments, chronic illness, psycho-social disturbances and differing intellectual ability. Extrinsic barriers are those factors that arise outside the student, but still have an impact on the student’s learning (Walton *et al*., 2009:107). These barriers may arise from the family and its cultural, social and economic context in society. Family problems such as death, divorce, violence and particularly in South Africa, HIV and the effect that it has on the family, are factors contributing to barriers to learning among students. Societal issues such as poverty, crime and a lack of safety in the community also impact on the students attending our Higher Education Institutions.

The researcher believes that addressing the learning needs of students who experience barriers to learning as mentioned above pertains not only to school children and school level educators, but also to university students and HEI lecturers. In EWP 6 (SA, 2001: 31) the further education and training sector has also been identified as an area where inclusivity should be addressed at institutional level. This essentially means that lecturers have to care about the needs of their students, especially those who

experience barriers to learning. Noddings (2005) suggests that if lecturers listen to their students, they gain their trust; and in an on-going relation of care and trust, it is more likely that students will accept what these lecturers try to teach. By engaging students in dialogue, much can be learned about students' needs, working habits, interests and talents. Consequently, lecturers can gain important ideas from them about how to build their lessons and plan for the individual progress of students, including accommodating barriers to learning.

The question arises how probable it is to care about individual students, especially in a university setting of sometimes up to a hundred or more students in a class. The aim of this research, however, is not to persuade lecturers to give individual attention to each and every student, but to make a paradigm shift regarding what it means to care for and support students that experience difficulties in the teaching-learning situation. Inclusive education challenges every educator not to see each student in the classroom as the same, but as individuals with different needs that could be addressed differently. Recognizing student diversity in the classroom is essential to creating inclusive education for all students (Neito as referenced in Whitecotton, 2009:16).

In a study conducted by Manalo *et al*. (2010) in Auckland, New Zealand, concerning the provision of learning support to university students, they found that students need support because of so-called visible disabilities, such as physical, sensory and mobility related impairments, but also as a result of hidden disabilities such as psychiatric problems, attention deficit disorders, neurocognitive disorders, traumatic brain injuries as well as learning disabilities. Many of these disabilities result in these students having reading, writing and spelling difficulties, as well as psychological and emotional problems persisting on a tertiary level. At tertiary level students are expected to work independently and take full responsibility for their own academic progress. However, to allow students, who experience barriers to learning, to achieve to their full potential, institutional and academic staff need to understand these barriers. In this study it was reported that staff members showed a lack of understanding and that this influenced their students' academic progress negatively (Manalo *et al*., 2010). Hence, the paramount need for lecturers is to know and understand different barriers to learning that students experience, in order to create a supportive and inclusive tertiary learning environment.

Research with students labelled with a learning disorder in higher education in Portland, USA, revealed that they felt as though they were regarded as intellectually inferior, incompetent, lacking effort or attempting to cheat or use an unfair advantage when they requested to be accommodated (Denhart, 2008). This could also be a factor influencing the success of students in South African universities and in particular at the University of Technology where the focus of the study is. For students to experience success and achievement in their studies, the teaching style, language, enthusiasm, availability and approachability of lecturers are important factors (Rogerson & Scott, 2010).

The researcher opines that the above could also apply to lecturers and courses taught at the University of Technology which is the focus of this study. The **gap** that the researcher has identified is that very limited research has been done on the role of lecturers at a higher education institution in South Africa in supporting students that experience barriers in achieving academic success, and especially on whether lecturers see it as their duty to support such students. The researcher acknowledges that the principles of inclusive education as outlined in EWP 6 are applicable to Higher Education Institutions. With this research, the researcher wants to investigate the prevalence of barriers to learning among students at a University of Technology, the existence of support structures, and in particular lecturers' opinions about supporting students who experience barriers in their learning and academic progress.

1.2 BACKGROUND TO THE STUDY

This study forms part of an international research project including South Africa, Finland, England, Slovenia and Lithuania. The purpose of this project is to explore the understanding of educators with regard to their roles in an inclusive setting within certain contexts. Ethical approval for the South African part was granted by North-West University (cf. Addendum A).

1.3 PROBLEM STATEMENT

The central problem to this research is:

What is the opinion of lecturers at a University of Technology regarding their roles in providing support to students who experience barriers to learning?

From this central research problem, the following sub-research questions can be formulated:

- What do barriers to learning entail?
- Which barriers to learning occur most commonly on tertiary level?
- Are lecturers at the university, which is the focus of this study, aware of barriers to learning experienced by their students in their classrooms?
- What does “supporting students who experience barriers to learning” entail on tertiary level?
- How do lecturers see their role in providing support to students who experience barriers to learning?
- What are the needs of lecturers at the university, which is the focus of this study, in order to provide adequate support to students who experience barriers to learning?

1.4 AIM OF THE RESEARCH

The aim of this study is to determine whether lecturers at a University of Technology are able to recognise barriers to learning among students and to determine how lecturers view their role in providing support to students experiencing barriers to learning.

To achieve the aim of this research, the researcher had to:

- establish what barriers to learning entail.
- ascertain which barriers to learning occur most commonly on tertiary level.
- establish what supporting students who experience barriers to learning entail on tertiary level.
- verify whether lecturers at the university which is the focus of this study are aware of barriers to learning that exist among students in their classrooms.
- determine how lecturers see their role in providing support to students experiencing barriers to learning and
- ascertain what lecturers at the university which is the focus of this study need in order to provide support to students experiencing barriers to learning.

1.5 RESEARCH METHODOLOGY

A mixed methods approach was followed in this research study, specifically a sequential explanatory design which involved two phases of data collection.

It was important for the researcher to identify a suitable research paradigm that would allow her to determine the course of the research project and identify appropriate data collection strategies to achieve the aims of this study.

The procedures used in each phase are outlined below and discussed in detail in Chapter 3.

1.5.1 Research paradigm

According to Feilzer (2009), pragmatism is the approach most commonly associated with mixed methods research. The acknowledgement that any knowledge produced through research is relative and not absolute and that causal relationships are difficult to identify, allows pragmatic researchers to be flexible and open to the emergence of unexpected data (Feilzer, 2009).

1.5.2 Literature review

A literature review was conducted for this study. The library of the North-West University Vanderbijlpark campus, was approached to assist the researcher in conducting a thorough literature review to provide a factual and theoretical background for the study.

The researcher used primary and secondary information obtained from relevant articles and books. National, as well as international literature was consulted. Searches on EBSCO HOST as well as Google Scholar were done to find the relevant resources.

The following keywords were used:

inclusive education, higher education, students, lecturers, ecosystemic perspective, constructivism, barriers to learning, learning support.

1.6 RESEARCH DESIGN

Creswell (2009:3) defines research designs as *"plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis.*" The research design should assist the researcher to reach the aims of the research.

The research design for this study is a mixed methods design. This design was deemed appropriate for this study because the aim was to determine whether lecturers at the University of Technology, which was the focus of the study, are able to recognise barriers to learning among students, and to establish how lecturers view their role in providing support to students who experience barriers to learning.

1.6.1 Sequential explanatory design

It is essential to ascertain whether one's proposed study would be regarded as empirical or non-empirical research, the former offering a greater degree of control within the research environment than the latter.

There is a strong suggestion within the mixed-methods research community that research, both quantitative and qualitative, should be best thought of as complementary. Quantitative and qualitative methods are not divergent, but focus on different dimensions of the same phenomenon (Amaratunga *et al.,* 2002:23). Therefore, a combination of these methods allows a broader and deeper understanding of the research problem. Creswell (*in* Maree, 2007: 261) defines mixed methods research as *"a procedure for collecting, analysing and 'mixing' both quantitative and qualitative data at some stage of the research process within a single study to understand a research problem more completely."*

The researcher made use of a mixed methods procedure, whereby a sequential explanatory design incorporated qualitative findings to help clarify quantitative results. In the first phase a survey was done by using a self-designed Likert questionnaire about the opinions of lecturers regarding support to students who experience barriers to learning at the University of Technology which was the focus of this study. After the quantitative data had been analysed, a second phase followed in which qualitative data

were gathered through individual semi-structured interviews. The researcher made notes during the interviews and the interviews were recorded and transcribed. According to Leedy and Ormrod (2010:188) face-to-face interviews have the distinct advantage of enabling the researcher to establish rapport with the participants and therefore gain their cooperation. The qualitative data were analysed and both the analysis of the quantitative and qualitative phases were then used to formulate a combined interpretation thereof.

1.6.2 Strategies of inquiry

1.6.2.1 Case study

With case study research, the researcher looks at a group of individuals as a whole and uses more than one source and technique in the data gathering process (Nieuwenhuis *in* Maree, 2007:76). In this research study, the researcher specifically focused on one University of Technology and aimed to answer the research questions through collecting data from the lecturers teaching at the institution. Niewenhuis (2007:76) mentions that the criticism against case study research is that it depends on a single case and is thus incapable of providing a generalising conclusion. The focus, however, of a case study is not to generalise, but to provide insight into the dynamics of a *specific* situation. In this case it was to determine the opinions of lecturers regarding their role in supporting students who experience barriers to learning, at the specific institution which was the focus of the study, and not to make a generalisation about other Higher Education Institutions in South Africa.

1.6.2.2 Survey research

A survey was conducted where the sample of lecturers completed a written Likert scale questionnaire. Survey research involves acquiring information about one or more groups of people – their characteristics, opinions, attitudes or previous experiences – by asking them questions and tabulating their answers (Leedy & Ormrod, 2010:187).

The results from the questionnaire were then analysed and displayed in tables and graphs. Appropriate statistical methods were applied to determine reliability and validity (c.f. 3.2.4.2).

1.6.2.3 Phenomenological research

For the purpose of the qualitative phase of the study, a phenomenological research study was done. According to Leedy and Ormrod (2010:141) a phenomenological study is a study that attempts to comprehend people's perceptions, perspectives and understandings of a particular situation, thus making it relevant to the objectives of the proposed study.

Semi-structured individual interviews were conducted with fifteen voluntary lecturers who completed the questionnaire. Qualitative interviews have the advantage of allowing the researcher to enter into the "inner world" of the participant to understand that person's perspective (Patton as referenced in Johnson & Christenson, 2012:202). Afterwards the interviews were transcribed and content analysis was done to identify themes emerging from the qualitative results that support the quantitative findings.

1.7 POPULATION AND SAMPLING

The target population for this study consisted of lecturers at the University of Technology, which is the focus of this study. The population consisted of both male and female lecturers who teach first year to post graduate students in the four faculties of the university.

The researcher used purposive sampling and random sampling as sampling methods. Purposive sampling was used for the quantitative phase in which questionnaires were distributed to lecturers teaching in various departments in the four faculties of the university. According to Maree and Pietersen (2007:178), purposive sampling is used in special situations where the sampling is done with a specific purpose in mind; in this case it was to determine the opinions of lecturers at the University of Technology. In the qualitative phase, random sampling was used to select participants for the semi-structured interviews. A detailed discussion of the sampling procedure will be provided in Chapter 3.

1.8 DATA COLLECTION

In the quantitative phase of the study, questionnaires were distributed to all the lecturers in the various departments which cooperated with the researcher in this research study. These departments reside under the four faculties of the university namely the faculty of Human Sciences, Applied and Computer Sciences, Engineering and Technology and Management Sciences.

When the questionnaire was distributed, the researcher requested participants to indicate if they would be willing to engage in a semi-structured individual interview with the researcher. An informed consent form was attached to the questionnaire and signed by each participant. This form indicated that the participant's personal details would be kept confidential by the researcher.

In the qualitative phase of the study, the researcher conducted interviews with fifteen lecturers on voluntary basis. The participants for the interview were chosen by means of random sampling from those lecturers who indicated that they would be willing to engage in a follow up interview with the researcher. The interview consisted of open questions and the researcher used probing when she needed greater depth and clarity from the interviewees. The interviews lasted up to 45 minutes per interviewee and were audio-recorded with the permission of the participants. Afterwards all interviews were transcribed verbatim. The questions asked to the participants were related to the topic of barriers to learning among tertiary students and how lecturers view their role in providing support to these students, and were meant to clarify the data obtained from the questionnaires. The interview schedule used in this research is attached (cf. Addendum E).

1.8.1 Data analysis and interpretation

In mixed methods research, data analysis implies that the researcher used both quantitative and qualitative techniques in a single research study (Johnson & Christenson, 2012:538). In this research study, data were collected in two stages and analysed sequentially: the quantitative data analysis was followed by the qualitative data analysis.

The quantitative data, collected by means of the Likert-scale questionnaire, were submitted for statistical analysis to a statistician at the North-West University. The statistician analysed the data using a computer software program called Statistical Package for the Social Sciences (SPSS) to ensure an accurate, valid and reliable statistical analysis. Through the quantitative results, the researcher was able to identify certain trends and emerging themes in the data.

The trends identified in the quantitative data, informed the analysis of the qualitative data. The transcriptions of the interviews were analysed through doing content analysis, and assigning codes to recurring themes and statements. According to Krippendorff (2013:127), coding takes place when the analyst interprets what she sees, reads or finds and then states her experiences in the form of an analysis. These themes and statements were compared to those identified in the quantitative data, and together they were grouped in categories, each supported by excerpts from the participants' responses during the semi-structured interviews. Categories are conceptual elements which reflect a recurring pattern across the data (Merriam, 2009:181).

A detailed explanation of the data analysis is provided in Chapter 3 (cf. 3.2.5.1).

1.9 TRUSTWORTHINESS, VALIDITY AND RELIABILITY

Pietersen and Maree (2007:215) describe the reliability of a measuring instrument as the degree to which the instrument, if administered at different times or to different people in the same population, would yield the same findings. It is an indication of the consistency of the measuring instrument. The level of internal reliability was established by measuring the Cronbach alpha coefficient (cf. 3.2.4.2, 4.2.1).

Validity refers to the extent that the measuring instrument measures what is intended to measure (Kumar, 2005:153) and was established by conducting a pilot study of the questionnaire, ensuring that each item in the questionnaire had a clear objective (face validity) and covered the full extent of the phenomenon (content validity). Construct validity was determined by the statistical procedures.

Trustworthiness refers to the quality of an investigation that makes it noteworthy to audiences (Schwandt, 2001:258). The researcher used the following constructs as

proposed by Guba (*in* Shenton, 2004:64) namely transferability, dependability, credibility and conformability to establish the trustworthiness of her findings. How each construct in the study was addressed is explained in detail in Chapter 3 (cf. 3.2.5.2).

1.10 ETHICAL ASPECTS

Ethical issues are always an important consideration when undertaking any type of research. According to Isreal and Hay (as referenced in Creswell, 2009:87) it is the responsibility of the researcher to protect the research participants, develop a trusting relationship with them, promote the integrity of the research, guard against any misconduct that might reflect on their institutions or organisations, and cope with the challenges that arise. In this study, the researcher attempted to uphold the ethical standards of the research and considered several ethical issues while designing this study as it involved human participants. The ethical aspects that were considered are the following:

- The researcher informed the participants about the purpose, methods and intended possible uses of the research in the informed consent form which was attached to the questionnaire.
- The anonymity of the respondents and the confidentiality of the information supplied by the research participants were respected. The researcher assured the participants that all information would be treated with the utmost confidentiality and would be used only for the purposes of this specific research.
- The research participants participated voluntarily, without any coercion.
- Participants could withdraw from the research without being questioned.
- The researcher treated all information disclosed in the questionnaire and the interviews with confidentiality and used it for no other purpose than the one intended in the study.
- Permission was obtained from:
  - The Faculty of Human Sciences Research Committee of North-West University (cf. Addendum A).
  - The Research and Innovation Ethics Committee of the University of Technology that participated in the research, allowing the researcher to conduct the research at the campus (cf. Addendum B).

1.11 DEFINITIONS OF KEY CONCEPTS

Table 1.1 Definition of key concepts

Key Concept	**Definition**
Inclusive Education	Education White Paper 6 (SA, 2001:16) describes inclusive education and training as the following: • Acknowledging that all children and youth can learn and need support. • Accepting and respecting that all learners are different in some way and have different learning needs which are equally valued and an ordinary part of human experience. • Enabling education structures, systems and learning methodologies to meet the needs of all learners. • Acknowledging and respecting differences in learners, whether due to age, gender, ethnicity, language, class, disability or HIV status. • Changing attitudes, behaviour, teaching methodologies, curricula and the environment to meet the needs of all learners. • Maximising the participation of all learners in the culture and the curricula of educational institutions and uncovering and minimising barriers to learning. • Empowering learners by developing their individual strengths and enabling them to participate critically in the process of learning.

	According to Donald *et al.* (2006:17) the South African policy on inclusive education is based on providing education that is appropriate to the needs of all learners, whatever their origin, background or circumstances and it is particularly important to accommodate the needs of students who experience different barriers to learning. Furthermore, inclusive education can be described as a commitment to building a more just society and more equitable education system (Green, 2001:4). For the purpose of this study the above concepts will apply to students aged between 18 and 28 years at the University of Technology which is the focus of this study.
Students	Persons studying at a university or college (OED, 2010). For the purpose of this study the term *students* will apply to individuals aged between 18 and 28 years studying at the University of Technology which is the focus of this study.
Lecturers	Persons who teach at a university or college (OED, 2010). For the purpose of this study the term *lecturers* refers to male and female lecturers teaching at the University of Technology which is the focus of this study.

Barriers to learning	A barrier to learning is any factor that is a hindrance or obstacle to a student's ability to learn (Donald *et al.,* 2006:3). In this study, barriers to learning will refer to the interplay of intrinsic and extrinsic factors that prevent students from achieving academic success.

1.12 CHAPTER DIVISION

A preview of the chapters in this study:

CHAPTER 1: INTRODUCTION

This chapter provides the reader with a general overview and information of the background to the study, the aims of the research and the research methodology employed.

CHAPTER 2: INCLUSIVE EDUCATION, BARRIERS TO LEARNING AND LEARNING SUPPORT

This chapter provides a review of the relevant literature on the topic and establishes a link between existing research and the problem to be investigated. This chapter also provides the reader with a conceptual framework for the concepts dealt with during the study.

CHAPTER 3: RESEARCH METHODOLOGY

Chapter 3 describes the research process in depth, including the research design and methodology followed in the study.

CHAPTER 4: DATA ANALYSIS, INTERPRETATION AND FINDINGS

An analysis of the data gained through questionnaires and transcribed interviews and the results in the form of statistics, graphs and themes is presented in this chapter. A clear explanation of the researcher's interpretations and findings is given.

CHAPTER 5: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Chapter 5 summarises the results of the study and serves as a relevant conclusion to this study, incorporating findings of the literature study and the research, limitations and contributions, as well as recommendations for further studies.

1.13CONCLUSION

The overview of the study was described in this chapter. The purpose was to offer a description of the research problem, including the aims and objectives of this study. A summary of the research design and methodology was put forward and ethical measures were set out. The following chapter presents a review of the relevant literature associated with the research topic.

CHAPTER TWO

INCLUSIVE EDUCATION, BARRIERS TO LEARNING AND LEARNING SUPPORT

2.1 INTRODUCTION

Society has come a long way in accepting that being “different” is not necessarily an adverse issue. In all areas of life there is diversity and people need to embrace it. There is diversity in language, culture, religion, sexual orientation, the way we dress, what we eat etc. Yet, when it comes to education, we tend to put learners in “boxes” and descriptive labels such as ‘smart’, ‘lazy’, ‘ignorant’ are used. Before the introduction of inclusive education in South Africa, it was the practice to exclude learners with special needs from formal education (Engelbrecht & Green, 2007:2, Swart & Pettipher, 2011, Nel, 2013). In contrast with exclusion where only those learners who are supposedly capable of academic achievement were included in formal education, inclusive education embraces difference and acknowledges that learners have a diversity of needs that make them unique in the educational setting and that all learners are capable of achievement. According to Sapon-Shevin (2008) inclusion is about creating a school community in which *all* young people and their families feel welcome and valued. With inclusive education the goal is to provide all learners with the instruction they need to succeed and achieve high academic standards alongside their peers (Nevada partnership for inclusive education, 2010).

The purpose of this chapter is to provide the reader with an in-depth understanding of what inclusive education entails and to present a paradigm shift of how learners can be included in *any* classroom (including a higher education classroom) to achieve their maximum potential, regardless of how “different” their learning needs might be. Furthermore it aims to clarify the concept “barriers to learning” and what support to learners who experience barriers to learning entails. The reader should take note that this research study focuses on tertiary students and not learners at school, although the majority of literature on the subject deals with the inclusion of learners at school level. Nevertheless, inclusive education applies to tertiary students as well, and it is a topic that reveals a gap in the existing body of literature on inclusive education, internationally and in South Africa. Since the focus of this study is on tertiary students, the term students will be used rather than learners.

2.2 UNDERSTANDING INCLUSIVE EDUCATION

According to Mittler (as referenced in Swart & Pettipher, 2011:4) *"inclusion is about developing inclusive community and education systems. It is based on a value system that invites and celebrates diversity arising from gender, nationality, race, language, socio economic background, cultural origin and level of educational achievement or ability."* There is an increasing emphasis on diversity in education and the need to identify and address barriers to learning (Engelbrecht & Green, 2007:4). Therefore the focus of inclusion should no longer be on the *"specialness"* of students and the education they need, but increasing participation by the removal of barriers to learning which prevent students from achieving success and reaching their full potential.

Booth (2011:310-313) describes the following values which are important in inclusive education:

- *Equality:* Everyone should be treated as of equal worth. An inclusive education system does not discriminate between students, but provides all students with the opportunity to receive quality education on an equal basis. Consequently, lecturers should strive to treat students with fairness by reducing inequalities in the classroom and encourage students not to be prejudiced based on difference.

- *Rights:* All young people have the right to education and training of high quality. In tertiary settings even more so since this right to education is not provided freely by the state, but is the financial responsibility of the student and his/her parents. Inclusive education acknowledges the right of students to education settings where their specific education needs are addressed. Booth (2011) asserts that human rights should at all times be promoted in education with reciprocal and caring relationships. A reciprocal and caring relationship is one where the "cared-for" recognizes the caring and responds in a detectable manner (Noddings, 2005). In a tertiary setting, a reciprocal and caring relationship is when the lecturer shows caring towards a student by accommodating his specific learning needs, making extra effort to help the student who struggles to attain the knowledge and skills needed to complete a task; thereafter the student maybe

responds with verbal gratitude, or simply pursues the project with more confidence.

- *Participation:* Students should actively engage in the learning process. A successful lecture is not simply an encounter where the lecturer fills empty, quiet vessels with knowledge, but one where students are actively listening, engaging with the subject matter, asking questions and applying newly acquired knowledge. The institution involved in this study embraces a teaching philosophy based on the principles of social constructivism. In social constructivism, teaching is student centred, and learning means belonging to a group and participating in the social construction of knowledge (Woolfolk, 2010:312).

- *Respect for diversity:* Diversity refers to difference. There is tremendous diversity among students in a Higher Education Institution. In any lecture room there may be variability from one student to the next in terms of culture, race, language, cognitive ability, knowledge background, level of maturity and behaviour. Therefore, lecturers should be aware of the diversity among students and how it can affect their teaching and the students' learning. Hence, an inclusive response to diversity should be created in a lecture room where students are treated equally and an atmosphere of respect and tolerance is established, regardless of perceived differences (Booth, 2011).

- *Community:* An inclusive view of community involves a broader fellow feeling towards others and is built through a culture which encourages collaboration. Through collaboration between the different stakeholders (lecturers, support staff, administrators, the students and their parents) a more supportive environment can be created. Collaboration requires a transdisciplinary approach to assess students and draw up intervention plans for their support needs (Nel *et al.,* 2013). The value of a community is also linked to the development of personal responsibility and ideas of community service, becoming a responsible and active citizen of your country as well as globally (Booth, 2011). In order to promote and achieve a sense of community, lecturers should endorse the values of social justice, democracy and fairness in their classrooms.

- *Sustainability:* Education should be aimed at preparing young people for sustainable ways of life within sustainable communities. A sustainable community includes people with disabilities who are able to make valuable contributions to community life. Consequently, the values of inclusion need to become part of our education systems and be applied in all contexts (such as schools, families, universities and government). According to Booth (2011), this necessitates attitudinal changes that must be integrated into all cultures.

- *Non–violence* applies to issues such as harassment, bullying and discrimination against people because of their gender, sexual orientation, disability, age or culture as forms of violence. Young people should be protected against these forms of violence and should also be taught how to deal with conflict, be assertive, solve problems and understand other viewpoints. This applies to any Higher Education lecture room where an atmosphere of safety must be created. This can only be done if differences are respected and accepted.

- *Trust:* Education settings should generate an environment of trust. Young people need to feel that they can talk about their problems and challenges and trust that they will receive the support they need. An “open door policy” could encourage students to seek help from staff and expect a positive response.

- *Honesty:* Honesty involves keeping promises, being truthful and avoiding hypocrisy by being true to your values and principles. In education, honesty involves sharing with your students information that may even be uncomfortable, and helping them to make informed decisions. An honest lecturer also encourages her students to ask difficult questions and admits that she does not know everything.

- *Courage:* Courage is needed to stand up for oneself and to stand against the discriminatory views and culture of one’s group. Inclusive lecturers stand up for those students who have been oppressed or labelled, and they act against discrimination.

- *Joy:* A classroom where learning is encouraged through play, humour and sharing will lead to joyful educational experiences. Education should not be

aimed at securing personal status, or for economic benefit. Inclusion promotes an atmosphere of acceptance and joyful engagement in learning, teaching and relationships. Creating a positive classroom environment is mainly the responsibility of the lecturer in the classroom.

- *Compassion:* To create an inclusive environment, compassion is needed for students who experience barriers to learning. An inclusive lecturer "feels with" his/her students and creates an environment where mistakes can be acknowledged, apologies can be accepted, restitution can take place and forgiveness is possible. When the student sees and experiences that he can make a mistake and does not need to hide it in fear of belittlement, he can learn from it and show the same courtesy to others that cross his path. Compassion is linked to humanity, i.e. seeing the humanness in others and responding with humanity to imperfections.

- *Caring:* Inclusive lecturers "care" about their students without asking anything. Noddings (2005) suggests that when lecturers listen to their students, they gain their trust, and in an on-going relation of care and trust, it is more likely that students will accept what lecturers try to teach. By engaging students in dialogue, much can be learnt about students' needs, working habits, interests and talents, and lecturers can gain important ideas from them about how to build their lessons and plan for students' individual progress.

- *Optimism:* Lecturers should convey hope to their students. The reality in South Africa is that many young people who graduate from university do not get employment; therefore, lecturers should motivate students to remain optimistic about the future and make the best of each opportunity that comes their way. Lecturers should inspire students to overcome their barriers to learning through hard work and not to give up on their educational goals.

- *Beauty:* Inclusive beauty is found in creating environments that are nourishing and uplifting. True beauty can be seen when one looks behind labels such as "non-achiever", "problem-child" and "disabled" that are placed on the student by people such as teachers, family members and the community. Inclusive education inspires kindness and acceptance among human beings and

encourages us to look deeper than what we see at face value. For example, many students who seem shy and not capable of accomplishing much on the surface, might have hidden skills and talents that need to be discovered and cultivated for such students to become highly successful individuals.

Inclusion can therefore summatively be defined as about helping each student to "belong" and exercise his/her human right to quality education. It moves away from a system of segregation based on what a student supposedly is capable of doing and not doing, towards a system that accommodates all students and their diverse learning needs.

With a clear view of what inclusion is and the values that it is built upon, it would also be valuable to look at the history of the worldwide movement of inclusive education.

2.3 INCLUSIVE EDUCATION AS A GLOBAL AGENDA

Inclusive Education is a universal philosophy and practice that has a global agenda and has played a major role in the educational reform of several countries (Nel *et al.,* 2012:6). In South Africa, inclusive education is entrenched in human rights and is founded on the belief that all children and students can learn and deserve the right to quality education. This belief, however, was not always practised in education. During the first half of the 1900's, many individuals with any obvious disability were seen to be incapable from benefiting from formal education (Engelbrecht & Green, 2007:3). A discourse started to develop about this matter in the early 1990's and governments in countries began to take responsibility for the education of children with disabilities in the form of "special education" (Engelbrecht & Green, 2007:3). Special education, however, was based on the medical model (cf. 2.6.1) and led to children being labelled and excluded from mainstream education and society in the belief that it was in their best interest. Thus, around 1996 concerns began to appear and questions started to arise whether it was really in the best interest of such children to be separated from their peers in mainstream education.

In 1990, the groundbreaking Jomtien Conference was held in Thailand where all the countries in attendance committed to achieve the goal of "Education for All". This was a significant event in the history of inclusive education because it acknowledged that large

numbers of learners were being excluded from education worldwide (Ainscow & Miles, 2008). The World Declaration on Education for All had an overall vision of universalising access to education for all children, youth and adults (UNESCO, 2009:8). Four years later, in June 1994, more than 300 participants representing 92 governments and 25 international organisations representing education officials, administrators, policy makers, United Nations representatives, non-government organisations and donor agencies, met in Salamanca, Spain, during which the Salamanca Statement on Principles, Policy and Practice in Special Needs Education and a Framework for Action were adopted at a conference on special needs education (UNESCO, 1994). The guiding principle of this framework is that mainstream schools should include all children, regardless of their diverse abilities and needs, and that inclusive education systems must "*recognise and respond to the diverse needs of their students, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organisational arrangements, teaching strategies, resource use and partnerships with their communities*" (UNESCO, 1994:11-12). This requires that education systems must become inclusive by catering for diversity and special needs, the premise being that differences are a normal part of life and therefore learning should be adapted to cater for those differences, rather than forcing the individual to fit into a perceived norm (Armstrong *et al.,* 2010). Though the focus of the Salamanca Statement is on creating inclusive schools, one has to assume that it applies to Higher Education Institutions as education centres as well, although HEIs are not explicitly mentioned in this document. The Salamanca statement does mention that curricula in senior classes should support students who have specific learning needs to enter higher education whenever possible. Education White Paper 6 (EWP 6) (SA, 2001), which is the blueprint for building an inclusive education system in South Africa, explicitly mentions that Higher Education Institutions should increase the access of learners with special education needs, and implement strategies and steps to increase the enrolment of these students (cf. 2.4).

The international movement towards inclusive education had a major influence on the changes in the South African education system. Political changes in our country after the 1994 elections resulted in a new constitution based on the principles of democracy, equity and non-discrimination (Green, 2001:10). It was no longer part of the educational ethos to exclude individuals from quality education.

The subsequent part of this chapter focuses on the development of inclusive education practice in South Africa.

2.4 INCLUSIVE EDUCATION IN SOUTH AFRICA

During the Apartheid years, education in South Africa functioned as a dual system with a mainstream and a special education component (Naicker, 2000). This dual system resulted in large numbers of white learners who experienced barriers to learning being excluded from mainstream education and placed in a special education system. However, it is essential to mention here that most black learners experiencing barriers to learning did not even have access to special education provided by government. With the establishment of a democratic society after the 1994 elections, comprehensive transformations were set in motion and a movement began towards restoring the human rights of all marginalised groups, such as learners with disabilities and special needs. The final adoption of the Constitution of South Africa Act of 1996 emphasised the new democratic government's commitment towards this (Engelbrecht, 2006).

Changing the South African education system to an inclusive education practice started with the establishment of the National Commission on Special Needs in Education and Training (NCSNET) in 1996, along with the National Committee on Education Support Services (NCESS) in 1997. The report, "Quality education for All: Overcoming barriers to learning", (created by the joint NCSNET and NCESS) emphasised the need for a paradigm shift, from a focus on learners with special needs to a systemic approach in identifying and addressing barriers to learning (Engelbrecht, 2006). The viewpoint of both the NCSNET and NCESS was that barriers to learning should not be perceived as residing only in the individual, but within the learning system as well (Green, 2001:13) (cf. 2.6.1). The issue of human rights moved to the forefront of all policy making and subsequently the documents that followed focused on the integration of special and ordinary education. In 2001, Education White Paper 6: Special Needs Education, building an inclusive education and training system, was published. This document became the foundation on which inclusive education in South Africa would be built and placed inclusive education and its focus on addressing barriers to learning, at the core of education transformation in South Africa. The key focus of EWP 6 (SA, 2001:6) is on acknowledging that all children and youth can learn and that all children and youth need support.

This document further describes inclusive education and training as the following (SA, 2001:6):

- Accepting and respecting that all learners are different in some way and have different learning needs which are equally valued and an ordinary part of human experience.
- Acknowledging and respecting differences in learners, whether due to age, gender, ethnicity, language, class, and disability or HIV status.
- Changing attitudes, behaviour, teaching methodologies, curricula and the environment to meet the needs of all learners.
- Maximising the participation of all learners in the culture and the curricula of educational institutions and uncovering and minimising barriers to learning.
- Empowering learners by developing their individual strengths and enabling them to participate critically in the process of learning.

According to Donald *et al.* (2006:17) EWP 6 is based on providing education that is appropriate to the needs of all learners, whatever their origin, background or circumstances, and it is particularly important to accommodate the needs of students who experience different barriers to learning. Furthermore, inclusive education can be described as a commitment to social justice and an education system that provides equal opportunities to all learners (Green, 2001:4). According to Mitchell *et al*. (2008) the success of inclusive education depends on a variety of factors, including the collective commitment of all social agencies to reduce barriers to learning for all disadvantaged youth in education and society.

Inclusive education continues to develop in South Africa, where the main focus is on creating inclusive schools. Yet, there is a great deal of vagueness on how inclusive education should be practised in higher education. It is the researcher's opinion that this might be due to a lack of policy regarding the implementation of inclusion in higher education as well as the fact that many lecturers do not have sufficient knowledge and understanding regarding what barriers to learning entail or what their role as lecturers is in supporting these students. In 2010, Disability Management Services conducted research on the needs of university students with disabilities in South Africa and prepared a project report for FOTIM (Foundation of Tertiary Institutions of the Northern Metropolis). One of the most important findings was that no single definition of disability

exists within the tertiary sector, and that different Higher Education Institutions all have their own ways of classifying students with disabilities and inadvertently dealing with such students (Healy *et al.,* 2011:11). It seems that a medical model of disability (cf. 2.6.1) remains predominant and although there is a move towards focusing on external factors to ensure full inclusion, the perspective remains one of the individual as the locus of the problem and not the environment. This necessitates a clear definition of disability in the context of higher education and requires that the necessary adaptations be made for disabled students to be accommodated fully.

2.5 INCLUSIVE EDUCATION IN HIGHER EDUCATION

Higher Education per implication means that only certain individuals in society will have the ability and opportunity to complete further studies after Grade 12. Higher Education Institutions pursue educational excellence and students are recruited on the basis of their scholastic achievement. Students who apply at a university or college have to meet the minimum requirements and go through selection processes to enrol for certain courses. Barnes (2007) argues that this inevitably means that certain individuals will be excluded because of their inability or "disability" and therefore one should ask if inclusion is truly possible in higher education.

Even when students are accepted into higher education, many students currently in the higher education system are faced with numerous barriers (mentioned later in this paragraph) that inhibit their learning and academic achievement. Research (cf. 1.1) has found that globally the number of students experiencing barriers to learning in higher education is increasing. In South Africa poor academic literacy levels and high drop-out rates are a clear indication that students are struggling to cope with their studies. Petersen-Waughtal and Van Dyk (2011) state that low academic literacy levels are regarded as a major reason for a lack of academic success in the undergraduate years and contribute greatly to high retention rates.

EWP 6 (SA, 2001:31) briefly mentions the inclusion of students in higher education when it states the following: "*The ministry therefore, expects institutions to indicate in their institutional plans the strategies and steps, with the relevant time frames, they intend taking to increase enrolment of these learners*."

The document, however, does not state who should take responsibility for equalising access to higher education for students who experience barriers to learning. It also does not provide clear guidelines on the steps that should be taken to make Higher Education Institutions inclusive, nor does it state any goals that Higher Education Institutions should work towards achieving. The documents that followed after White Paper 6 focus on the transformation of schools to become inclusive learning environments, but not on HEIs. These documents are:

South Africa. Department of Education. 2002. Draft conceptual and operational guidelines for the implementation of inclusive education. Pretoria: Government Printer.

South Africa. Department of Education. 2005. Conceptual and operational guidelines for special schools as resource centres. Pretoria: Government Printer.

South Africa. Department of Education. 2005. Conceptual and operational guidelines for full service schools. Pretoria: Government Printer.

South Africa. Department of Education. 2005. Conceptual and operational guidelines for district based support teams. Pretoria: Government Printer.

South Africa. Department of Education. 2005. Draft national strategy on screening, identification, assessment and support. Pretoria: Government Printer.

South Africa. 2007. National Education Policy Act (27/1996): National policy on assessment and qualifications for schools in the general education and training band. Pretoria: Government Printer.

South Africa. 2008. Department of Education. National strategy on screening, identification, assessment and support. Pretoria: Government Printer.

South Africa. 2009. Department of Education. Guidelines for full service/inclusive schools. Pretoria: Department of Education.

South Africa. 2010. Department of Education. Guidelines for inclusive learning programmes. Pretoria: Government Printer.

Matshedisho (2007) confirms that there is no coherent policy regarding disability in higher education. Support to students with disabilities at universities greatly depends on the benevolence of lecturers, as it seems that they are not formally obliged to assist disabled students. The social model of disability (cf. 2.6.1) demands that students have the right to support in education, yet in South Africa this is challenging, as there is a serious need for resources, academic staff development, assistive technology and flexibility in the application of the curriculum at Higher Education Institutions. According to Chataika *et al*. (2012) in their paper published after the 2nd African Network of Evidence-to-Action on Disability Symposium, it was found that disabled students in higher education face infrastructural, institutional and environmental barriers. These include inaccessible environments, lack of reasonable accommodation, negative attitudes, discriminatory admission procedures and lack of disability policies and resources, all of which inevitably lead to disabled students being disadvantaged in their institutions. Chataika *et al.* (2012:394) describes a reasonable accommodation as "*any action that helps to alleviate a substantial disadvantage resulting from an individual's impairment or medical condition*." These accommodations include provision of note takers, time extensions, assistive computer technology, test modifications, taped lectures, voice activated software, accessible teaching methods and sign language interpreters. It can, however, not be automatically assumed that these accommodations will be granted, and students have to qualify for each accommodation to ensure that they do not have an added advantage over other students (Chataika *et al*., 2012). The paper, however, does not mention how it is determined whether a student qualifies for a specific accommodation or not. At the institution where the researcher is teaching, students have to disclose the nature of their disability on the application form. This could be problematic, due to misconceptions about disability or the fact that students might not want to disclose that they have a disability, for fear of rejection of their applications.

The institution, where the researcher is currently lecturing, has a policy for students with disabilities which states that the institution is committed to helping students, within its own budget, with reasonable accommodations to enable them to complete their higher education studies successfully (VUT, 2005:1). However, it does not mention what is expected from lecturers in this regard. Students with disabilities are responsible for disclosing the nature of their disability and special needs so that assessment of their need for special support can be done, and that the Bureau for Student Counselling and Support can arrange academic counselling, supervision and review their progress.

Whether this happens in practice and how effective it is remains questionable. One should also bear in mind that there are students who do not disclose their need for support, perhaps in fear of stigmatization or because they do not know who to consult when they experience difficulties. The term “disability” might also have a different meaning to students and the institution. In the context of the institution’s disability policy, the term disability is defined, “*any restriction resulting from impairment of lack of ability to perform an activity within the range considered normal for a human being.*” (VUT, 2005:1). A natural misconception about the word “disability” is that people only think of a person in a wheelchair. However, disability is a much broader concept which includes but is not limited to the following: mobility and physical impairment, sensory impairment, cognitive impairment, intellectual impairment, mental illness and various types of chronic disease (Disabled World, 2009). Thus, a student might not disclose that he has a learning problem and needs support because he does not think that it is a “disability”. Since a learning disability is not incorporated in this definition, the need for it to be accommodated and supported is often not recognised. However, many students enter higher education with reading, writing and mathematical disabilities for which accommodations (such as extra time, amanuensis etc.) were made during their school years.

Consequently, it is clear that there is a lack of policy, or the implementation thereof, regarding inclusive education in higher education, and confusion regarding the definition and range of barriers to learning. As a result, there are numerous students attending South African HEIs who are not receiving the support that they are entitled to.

With a clear view of the development of inclusive education, abroad and in South Africa, it would be valuable to look at the theoretical framework that informs inclusive education.

2.6 THEORETICAL FRAMEWORK UNDERPINNING INCLUSIVE EDUCATION

2.6.1 The need for a paradigm shift: The medical model versus the socio – ecological model

According to the Oxford English Dictionary (2012), a paradigm is a *"world view underlying the theories and methodology of a particular scientific subject"*. With the implementation of inclusive education, a worldwide paradigm shift with regard to education had to take place, from a medical deficit model to a social systems change approach. A shift in paradigm does not imply that an immediate change in practices will happen, and although inclusion is very prominent in education today, the medical model is still frequently in use as an explanatory framework (Swart & Pettipher, 2011:5).

The medical model is a model of diagnosis and treatment. Previously, learners at school level who experienced barriers to learning were categorised according to their conditions or problems. The learner was seen as "someone" with whom "something" was wrong, who needed to be treated. These learners were placed in a specialised environment which resulted in labelling (Nel *et al.,* 2012:9). This particular model is of great value in the field of medicine, where the focus is on diagnosing a problem and ensuring that the person receives proper treatment. However, it is less helpful in the social sciences where the barriers to learning are often not located within the learner (intrinsic barriers to learning) (cf. 2.7.1), but could also be located in the outside environment (extrinsic barriers to learning) (cf. 2.7.2). When applying the medical model to education, it leads to learners being singled out, focusing on what is wrong and how to treat it, not taking into account all the external factors that could lead to this learner not being able to perform well: e.g. conflict at home, a lack of nutrition, emotional problems, etc. With the move towards inclusive education, a paradigm shift was required from the medical understanding to a more holistic view of the learner.

The focus had to shift from the "specialness" of students and the "special treatment" that they needed, towards the removal of stumbling blocks within society and education (Florian *in* Swart & Pettipher, 2011:7). The socio-ecological model moves away from the notion that a student who experiences difficulty in learning has only an intrinsic problem that can be treated in a specific way, to a belief that there are other factors that could lead to this student not functioning optimally, i.e. barriers that prevent the student from

reaching his maximum potential. The Salamanca Statement declared that inclusive education systems should "*recognise and respond to the diverse needs of students, accommodating different styles and rates of learning and ensuring quality education to all through appropriate curricula, organisational arrangements, teaching strategies, resource use and partnership with their communities*" (Unesco,1994:11 – 12).

According to Swart and Pettipher (2011:9) the onus no longer rests on the student to "fit" into the systems, but on educational systems to transform so as to be able to accommodate and address the diverse needs of all students so that each individual student receives an educational experience that "fits". In order for such transformation to take place, a radical change in assumptions, beliefs, values, norms, behaviours and practices is required. The medical model still has value in terms of finding the problem and suggesting a solution, but in the social sciences, where risk factors and barriers are often not only within the person, but also in the community, the medical model cannot be used as the only model in handling these complex issues (Swart & Pettipher, 2011:5, Nel, 2013).

With the change in paradigms, it became evident that the terminology used needed to reflect the vision of inclusion. Terminology associated with the medical model includes concepts such as *special needs* which changed to *barriers to learning, remedial education* which was replaced by *learning support* and *changes within the individual* to *systems changes* (Swart & Pettipher, 2011:14).

Bronfenbrenner's bio-ecological model is one of the significant theories that played a role in this change of paradigms. The bio-ecological model can be used as a framework to analyse the different systems in inclusive education and to examine the influence of extrinsic factors on learners. The bio-ecological perspective moved away from focusing only on the individual's intrinsic problems to a broader assessment of all systems that have an impact on barriers to learning experienced by students (Hay, 2003).

The subsequent section of this chapter will explore the theory underpinning inclusive education, which is Bronfenbrenner's bio-ecological model as well as constructivism.

2.6.2 Bronfenbrenner's Ecological Systems Theory

When attempting to understand inclusion and barriers to learning (cf. 2.7) experienced by students, one should bear in mind the different factors that have an influence, and the context in which the student finds himself. Bronfenbrenner's ecological model is helpful in understanding the importance of interaction between the development of an individual and the systems within the individual's context (Swart & Pettipher, 2011:11, Nel, 2013). Students grow up in families and are members of particular ethnic, religious, economic and language communities. They live in neighbourhoods, go to schools and universities, and are members of classes, teams, and social groups. Their lives are influenced by what happens in their communities as well as the country at large (Woolfolk, 2010:66). These contexts in which they function in different roles (e.g. child, student, friend) influence the development of behaviour, beliefs and knowledge. Bronfenbrenner's bio-ecological model identifies the social contexts in which individuals develop as ecosystems because they are in continuous interaction and influence one another (Woolfolk, 2010:66). Whatever happens in one system will affect another system and in turn affect the individual at the centre of these interrelating systems.

The socio-ecological model acknowledges that barriers to learning do not exist only in the student, but that there are also barriers in society that prevent the student from reaching his potential. When attempting to support students who experience barriers to learning, factors in their immediate environment and the wider community should be taken into consideration.

In Bronfenbrenner's model, four interacting dimensions are central to this process:

- person factors, for example behaviour patterns
- process factors, for example patterns of interaction between family members
- contexts, such as families, universities, local communities
- time, such as changes in the individual or surroundings (Donald *et al*., 2006:39)

The face-to-face interactions that occur between the student and other significant people (e.g. parents, lecturers, friends) are the most important in shaping lasting aspects of development and are called proximal interactions. Proximal interactions are affected by person factors and the social contexts in which they occur (Donald *et al*., 2006:41). Bronfenbrenner's model uses four interacting nested systems to understand

the process of human development namely the microsystem, mesosystem, exosystem and macrosystem (see figure 2.1). Each student lives within a microsystem, inside a mesosystem, embedded in an exosystem, all of which are part of the macrosystem (Woolfolk, 2010:66). These systems all interact with the chronosystem.

The microsystem constitutes a pattern of activities, roles and interpersonal relations between individuals and the systems in which they are active participants, such as the family, university and peer group (Swart & Pettipher, 2011:14). The microsystem is therefore the immediate environment where proximal interactions take place. What happens in the microsystem has an effect on the individual's cognitive, social, emotional, moral and spiritual development (Donald *et al*., 2006:41). For example, if the student is exposed to conflict at home between his parents, it could have an effect on his emotional state and in turn affect his other interactions in other microsystems, and result in academic problems. With regard to barriers to learning, it is in this context where the student himself, as an adult, must identify that he has a specific problem and then seek help from the lecturer or request educational support from Student Support Services. The lecturer could also identify barriers to learning, consult with the student, provide the needed support, and if needed, refer the student to student support services for further assistance. Interaction with peers could offer support when, for example, a friend could offer to take notes during lectures because the student has trouble keeping up with the pace at which the lecturer is presenting the class. Advisors at the university could help students to make the right choices in choosing courses and degree programmes based on career interest and academic strengths and weaknesses (Whelley*et al*., 2003). The family could provide emotional and financial support. It is therefore obvious that the interaction between the student and his immediate environment plays a pivotal role in his learning and academic achievement.

The mesosystem is a system of microsystems which continually interact with one another. Thus, what happens in the student's family or peer group has an influence on his performance in class and vice versa. For example, if there is conflict or financial problems at home it could influence his academic performance. It will be very difficult to implement inclusive education without paying attention to the development of relationships between the different microsystems such as the university - family partnership (Swart & Pettipher, 2011:14). Another example could be a student who has a chronic illness which has an adverse effect on his studies. Interaction between the

campus clinic and lecturers could help to provide the much needed empathy and support that the student needs and will benefit his learning, bearing in mind that it will happen at the discretion of the student, as medical and support staff are bound by confidentiality. Collaborative relationships between the different microsystems could help to offer better support to students who experience barriers to learning.

The exosystem refers to one or more environments which the student is not directly involved in, but which may influence the people who have proximal interactions with him in his microsystems (Donald *et al*., 2006:42). An example could be a parent's stressful situation at work that has a negative effect on the children at home. The student has no control over what happens in the exosystem, but could be positively or negatively affected by these events. Another example could be where Student Support Services advise a lecturer to make notes available for students who struggle to cope in class, but the lecturer may be reluctant to do that for fear that other students may abuse the favour and not attend classes.

The fourth system that Bronfenbrenner refers to is called the macrosystem. It includes dominant social and economic structures, as well as values, beliefs and practices that influence other social systems. Values and beliefs are for example democracy, social justice and ubuntu (Swart & Pettipher, 2011:15, Nel, 2013). The macrosystem encompasses two systems, the wider community and the whole society. Society's values and beliefs towards disabilities and barriers to learning influence the extent to which students are seen as capable of achieving academic success. If the tertiary institutions and academia do not uphold a culture of inclusion and an ideology that barriers to learning are obstacles that can be overcome, support provision to such students will be limited.

The chronosystem refers to developmental time frames which cross through the interactions in the other systems and their influences on individual development (Swart & Pettipher, 2011:15). All systems which the student is involved in, continuously change and develop and have an effect on the student's social, moral, emotional and cognitive development. A diagrammatic view of Bronfenbrenner's eco-systemic model can be seen in figure 2.1.

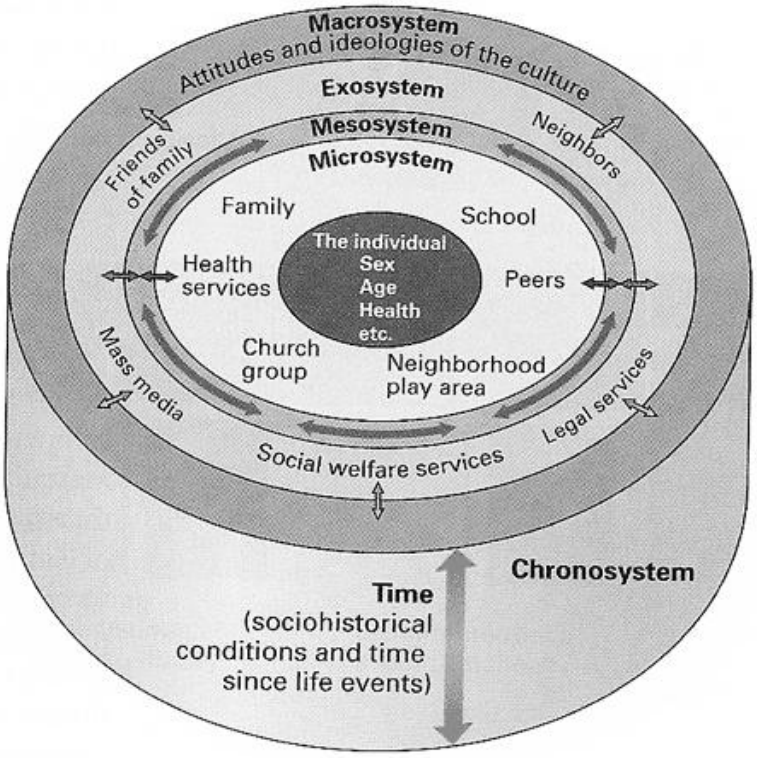

Figure 2.1: Bronfenbrenner'secosystemic model (Cadwallader, 2010).

Swart and Pettipher (2011:15) propose principles of general systems theory that help us to understand Bronfenbrenner's model:

- Systems need to maintain a dynamic balance while adapting to internal and external change. This is called equilibration.
- Circular causality states that change in any part of any system affects other systems and individuals and could be a cause for further change. For example, a change in educational policy could affect education institutions. Illness of a family member has an influence on the individuals in the family and vice versa. This is also referred to as reciprocity.
- The whole system is greater than the sum of its parts. To understand the whole, the relationships between the different parts of the system need to be examined.
- Rules are needed for the systems to function effectively, and difficulties arise if rules are not adhered to. When the rules and values of each system are not discussed and shared, miscommunication and stereotyping occur.

Bronfenbrenner's theory highlights the dynamic interaction between different systems, and with regard to inclusion, it helps us to understand the complexity of the interaction and interdependence of multiple systems that have an impact on students, their development and learning (Swart & Pettipher, 2011:16).

To summarise, when applied to this study, Bronfenbrenner's ecosystemic theory provides a model to help us understand the interaction between students who experience barriers to learning, the contexts in which they function and the stakeholders that should provide the support needed. In a Higher Education Institution the student, as a young adult, is at the centre of interrelating ecosystems and should play an active role in starting the process of support by identifying himself and seeking educational support or being identified by the lecturer and receiving the necessary help. The different contexts (family, university, peer group, community) in which the student functions can either facilitate or hinder the provision of support. Therefore, it is the responsibility of the university to become an inclusive, supporting environment in which the student can learn and have the confidence to admit that he is not coping, receive support, and consequently achieve academically.

2.6.3 Constructivism

According to Donald *et al.* (2006:8) the constructivist perspective is "*a view that does not see knowledge as a given, but as actively and continuously constructed by individuals, groups and societies.*" The student is not merely an empty vessel which is filled with knowledge, but actively takes part in the learning process through mental and physical activities. According to Reed *et al.* (2008) constructivism is a popular approach in modern education, allowing students to interact with others in the process of constructing and internalising knowledge. It is in sharp contrast with traditional teaching where lecturers attempt to verbally transfer knowledge to a passive student. With traditional teaching, lecturers regard students as having "knowledge holes" that need to be filled with information (Novak, 1998). Social constructivism recognises and rewards the individuality of students, suggesting that interaction with others allows a dynamic sharing of knowledge, understanding and experiences which is valuable in learning. Inclusive education is based on the same principle, recognising the individuality and diversity of students and acknowledging that all students can learn and achieve.

Thus, when a lecturer reverts to the “talk and chalk” method of teaching, many students do not actively engage with the new knowledge, which could lead to a low level of learning. According to Piaget and Bruner, pioneers in the field of constructivism, knowledge must be constructed and re-constructed as the individual progresses to higher levels of understanding. Vygotsky states that knowledge is something that constantly changes and is learned through social interaction. It is also connected to social, historical and cultural contexts and what may be accepted as the “truth” in one context may not be accepted in another. Therefore, we should always question the beliefs, values and assumptions that underlie what we are studying, as well as our own constructed meaning (Donald *et al*., 2006:84).

When looking at inclusive educational settings from a constructivist perspective, the lecture room is seen as a social, interactive place where the context, learning and activities influence the student’s thoughts and actions. Kugelmass (2007:275) states that: “*Social constructivism’s focus on the significance of context to learning provides the rationale for the inclusion of students with disabilities and other special education needs in general education settings.*” Furthermore, the constructivist perspective supports the eco-systemic perspective as it acknowledges that more than one factor has an influence on the student and his ability to actively construct new knowledge. In social constructivism, learning means belonging to a group and participating in the social construction of knowledge (Mason *in* Woolfolk, 2010:312). One of the goals of inclusive education is to help students belong to society. In a tertiary setting, belonging to a group can provide the much needed moral support to complete a diploma or degree despite adverse circumstances. When the student participates in group discussions, his confidence increases and learning takes place. According to Williams and Williams (2011:13) positive social interaction between a student and his peers leads to students becoming more engaged in the learning process. This can occur during group discussions, group projects and presentations. Students experiencing barriers to learning can benefit from these positive social interactions by experiencing a sense of belonging and fulfilment in participating to complete a task while learning takes place.

This chapter will now explore the barriers to learning that students are faced with in the higher education environment.

2.7 BARRIERS TO LEARNING

According to Prinsloo (2011:29) *"a barrier is an obstacle or circumstance that keeps people or things apart; it prevents communication and bars access to advancement*."

In many countries and publications, the phrases "special needs" and disabilities are still used; however, the accepted term in South Africa is "barriers to learning" (SA, 2001). According to Howell (as referenced in Walton *et al.*, 2009:107) this term is preferable to 'special needs' which signifies a medical or deficit approach to educational difficulties and locates the problem within the learner, rather than the system. Donald *et al.* (2006:3) define a barrier to learning as "any factor that is a hindrance or obstacle to a student's ability to learn." Barriers to learning may be best understood as resulting from a complex interplay of learners and their contexts, including the reality of impairments or disabilities, socio-economic restraints and wider societal factors including values, attitudes, policies and institutions (Walton *et al.,* 2009:3). Thus, if a student has some impairment or disability, the barrier lies in the interaction between the student and the different contexts (home, university, peer group, wider society) in which he finds himself. The focus should shift from "fixing" the student to addressing the barriers that prevent the student from achieving academic success.

The SIAS (Screening, Identification, Assessment and Support) strategy manual (SA, 2008:8) describes barriers to learning as difficulties that arise within the education system as a whole, the learning site and/or within the learner himself, which complicate access to learning and development for learners. Thus, there are intrinsic factors located within the student, and extrinsic factors located outside the student that could have an impact on academic achievement.

2.7.1 Intrinsic barriers to learning

Intrinsic barriers to learning refer to factors that are located within the student that have an impact on students' learning and academic performance. Intrinsic barriers to learning include physical, sensory, neurological and developmental impairments, chronic illness, psycho-social disturbances and differing intellectual ability (Walton *et al.,* 2009:107). The following intrinsic barriers will be discussed in this study:

- Physical impairments
- Sensory impairments (Visual and Hearing impairment)
- Learning impairments and learning difficulties
- Health problems
- Psychological problems.

Lecturers who identify students with these barriers in their classrooms need to be aware of the effect that these barriers could have on the student's ability to concentrate and learn. Knowledge of these barriers could help lecturers to plan accommodations to broaden the participation of these students inside the classroom during classwork and group work; and outside the classroom when doing assignments, projects and practical applications. A brief overview of these barriers will now be provided.

2.7.1.1 Physical impairments

According to Kruger and Smith (2011:291) a physical impairment could occur in different degrees of severity, from barely noticeable to profound, and could have different causes such as birth defects, illness, accidents or hereditary factors. Students with physical impairments experience many challenges such as mobility problems, negative self-concept, social and emotional problems which create barriers to their learning. Although the number of students with physical impairments in higher education may be limited, physical adaptations to buildings on campus could make a big difference to a student in a wheelchair or a student struggling to get to class on time owing to a physical constraint. These could include wheelchair ramps on campus, elevators that are in a working condition and where preference is given to disabled persons, wheelchair accessible bathrooms and modified desks in classrooms.

2.7.1.2 Sensory impairments

According to Landsberg (2011:363), a visual impairment could range from being totally blind to being partially sighted. The needs of these students will differ according to the severity of their visual impairment. Visual impairment could also lead to extrinsic barriers such as stereotyping, inflexibility in the curriculum and inadequate support services (Landsberg, 2011:371).

A hearing impairment encompasses the full spectrum of hearing loss, from mild to total deafness (Storbeck, 2011:382). As a result of the human rights movement and the move towards inclusive education, the term “deafness” is preferred to hearing impairment and refers to all hearing loss, making the distinction between deaf and hard-of-hearing only when necessary to do so. The reason for this is to avoid the disability label of “hearing loss”, “hearing impairment” and “hearing disorder” (Storbeck, 2011: 383). In the tertiary environment, there may be students who struggle to see on the board, or to hear during lectures. Support could be provided to these students in terms of preferential seating in class, photocopying tests and assignments in a larger font to make them more readable and providing notes of lectures to these students. Lectures could be audio taped, allowing visually impaired students to listen to the lecture and digest the content at their own pace afterwards. For students with a hearing impairment, a sign language interpreter could be made available in class so that they can follow the lecture. Although there might only be one student in a class who is in need of this accommodation, he or she has the right to an interpreter.

2.7.1.3 Learning impairments and learning difficulties

A distinction should be made between learning impairment and learning difficulties. In almost all education settings there are students who experience learning difficulties and find it challenging to cope with a specific learning area or subject (Dednam, 2011:399; Nel, 2013). Lecturers might not even be aware of these learning difficulties or of the fact that with adapting and accommodating teaching strategies, these students could obtain better results. Mostly these difficulties arise due to extrinsic factors such as a lack of motivation, concentration problems, a non-supportive study environment and so forth. On the other hand, students with learning impairments experience difficulties regardless of excellent teaching and a supportive study environment. These learning impairments could have a variety of causes ranging from biochemical and metabolic factors to environmental factors such as poor nutrition and impaired brain functioning (Dednam, 2011:402). Examples of learning impairments include but are not limited to cognition problems, attention and memory problems, poor organisation and perception, Attention Deficit Hyperactivity Disorder, Attention Deficit Disorder and Dyslexia.

2.7.1.4 Health problems

A person could feel ill without having a disease or health impairment (Kunneke & Orr, 2011:469) e.g. a student might experience low blood sugar without having diabetes. Chronic diseases or health impairments could affect the student in the long term and such students require regular medical attention. A student suffering from HIV/AIDS and related diseases such as Tuberculosis might be absent quite often and struggle to cope with a heavy workload due to a compromised immune system and low energy levels. Combined with poor nutrition, these diseases pose a major barrier to learning for the student.

There might also be students who suffer from chronic conditions that have not been diagnosed by a medical doctor, perhaps due to a lack of access to medical services. These conditions could also lead to absenteeism, which has a very negative impact on a student's academic success. Health problems and the side effects of medication could affect a student's vitality, concentration, energy and ability to perform tasks. Unless a student chooses to disclose a condition to his/her lecturers, they might not be willing to provide any accommodation such as alternative assignments, class notes or extra help.

2.7.1.5 Psychological problems

There are various psychological problems that students could encounter. One should distinguish between a psychological disorder and a psychological problem. The Oxford English Dictionary defines a problem as "*a matter or situation regarded as unwelcome or harmful and needing to be dealt with and overcome"* and psychological as *"affecting, or arising in the mind; related to the mental and emotional state of a person*"(OED, 2013). A psychological disorder on the other hand is defined as *"a psychological dysfunction within an individual that is associated with distress or impairment in functioning and a response that is not typical or culturally expected"* (Barlow & Durand, 2005:2).

Thus, a psychological disorder impairs normal functioning and may be a chronic condition. A psychological problem could present itself sporadically and have an influence on the individual's day to day functioning, but the person is generally able to function normally e.g. the difference between having an anxiety disorder and just feeling

anxious in certain situations. There might be students who suffer from psychiatric conditions as listed according to the index of psychiatric disorders in the Diagnostic and Statistical Manual (DSM IV), but assessment and diagnoses of these disorders may only occur once the disorder manifests and the student is referred for help. Psychological problems that could manifest among tertiary students are for example stress, anxiety and depression. Many of these problems may arise due to extrinsic factors such as financial constraints, trauma, relationship problems and difficulty coping with the demands of tertiary studies (cf. 2.7.2). Sommer and Dumont (2011) found that there was a high dropout rate among disadvantaged students at South African universities, not only due to financial problems, but also due to problems related to adjusting to tertiary life and the academic workload. In a recent study conducted with first year students at a university in Zimbabwe to determine their social and academic adjustment, it was found that these students encountered several challenges in adjusting to tertiary life. Differences in culture, language and religion are factors that were reported as making it difficult for students to communicate with other students. Many students experienced "homesickness" and were worried about their families at home. Some students found it difficult to make friends and to socialise, which led to loneliness. A lack of finances also presented problems such as feeling inferior about their clothing, a lack of food and textbooks. A large number of first year students revealed that a fear of failure led to anxiety and also that the teaching style at university differing from high school caused academic stress for them (Mudhovozi, 2012). Anxiety is also one of the most commonly reported problems that relates to depression among university students (Field *et al*., 2012b). Field *et al*. (2012b) also found reports of sleep disturbances among depressed students. One could expect that the combination of depression and sleep disturbance will have a negative effect on concentration and academic performance.

In a study with Australian students, it was found that university students can experience very high levels of psychological distress and that the majority of these students do not seek help, indicating that they accept psychological distress as being part of student life. Second and third year undergraduate students experienced the highest levels of stress followed by first year students, suggesting that psychological distress continues into the undergraduate years (Stallman, 2010). It is thus clear that psychological problems could pose a threat to students' ability to adapt and cope with the demands of tertiary

education, and that the focus of institutions should not only be on improving the experience of first year students, but the entire student population.

2.7.2 Extrinsic barriers to learning

Extrinsic barriers to learning refer to factors that arise outside the student. Especially in a developing country such as South Africa, these barriers are prominent (Nel *et al.,* 2012:15). The following extrinsic barriers will be discussed in this study:

- Socio-economic barriers
- Social and emotional problems
- Inflexibility in the curriculum to accommodate the learning needs of students
- Language barriers
- Inadequate support services.

2.7.2.1 Socio-economic barriers

In South Africa, socio-economic disadvantages have had an adverse effect on education and social development and have resulted in numerous barriers to learning (Lomofsky & Lazarus, 2001). Sustained poverty, poor living conditions, under-nourishment, overcrowded housing and the accompanying social problems such as dysfunctional family life, abuse, addiction, crime and chronic illness including HIV/AIDS, have a tremendous negative effect on the social, moral, emotional and cognitive development of learners. According to Donald *et al.* (2006:168), youth living in poverty are more susceptible to the health and safety risks which cause physical, neurological, cognitive and sensory problems that, in turn, lead to disabilities and learning difficulties. Poverty creates a negative cycle which is reinforced by poor education when students who experience these barriers to learning cannot have their learning needs met in classrooms that are overcrowded and under-resourced (Donald *et al*., 2006:169). Many students who are admitted to university, may not be exposed to such severe circumstances anymore, but may be a product of growing up in a family that experienced these problems or a school that had minimum educational resources, and they are thus “underprepared” to meet the demands of higher education studies. There are undoubtedly higher education students who struggle financially, who do not live in academically conducive environments and do not get the nutrition needed to

concentrate and perform to the best of their ability. Students who are subjected to such circumstances experience increased emotional stress which has an influence on their learning and development (Anon, 2013). Machika and Johnson (2014) confirm this in their article “Poor students face massive stress” and assert that it is imperative for institutions of higher learning to understand the impact of poverty and the conditions under which students live, think and learn, and how these conditions affect their academic success. In a study which investigated the extent of learning barriers that previously disadvantaged black students at a well-known higher education institution in South Africa experience, it was found that there are various socio-economic factors that impact students’ learning. Students from poor families often feel inferior when confronted with other students from more affluent backgrounds. The responsibility of taking care of a younger sibling at home while having to study, transport problems and a lack of family support were also factors which created barriers for these students (Steyn & Kamper, 2011). According to Steyn and Kamper (2011) students from previously disadvantaged backgrounds also struggle with self-discipline and study planning skills, which makes it extremely difficult to learn independently and meet the demands that tertiary study places on a student. Higher Education Institutions need to be aware of students’ needs and share in the responsibility for students’ success (Machika & Johnson, 2014).

2.7.2.2 Social and emotional problems

Young adulthood is a challenging time and a period of making the transition from being a child in your parents’ home to an independent and responsible citizen in society. University students are faced with a newly found freedom, but also with the responsibility of adapting to an academically challenging environment and balancing studies, living arrangements and chores while faced with many temptations, distractions and peer pressure. Students are no longer under the supervision of their parents and the use of alcohol and substances is seen as the norm. Many students do not recognize the adverse effect of using substances and believe that it is part of normal university life and experimentation (Gilchrist, 2013). A new and unfamiliar social environment and the accompanying pressure to form part of a social group often lead them to experimentation with different substances (Surujlal *et al.,* 2012). Alcohol has been found as a popular choice of substance among students (Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention, 2008). The use of substances is often

associated with class absenteeism, poor academic performance and risk taking behaviour. Stone *et al*. (2012:771) assert: *"Among young adults, substance use has been linked to deaths, injuries, and among college students, academic problems, fighting, and sexual behaviour problems."* In 2001, a study with 799 first year students at a South African university revealed the use of several substances among students such as tobacco, alcohol, cannabis, opiates, tranquilizers, sedatives and stimulants, to mention a few. The study found an association between symptoms of anxiety and depression (cf. 2.7.1) and the use of cannabis and alcohol (Peltzer *et al.,* 2001). One has to assume that substance use could present itself as a major barrier to learning, especially if the student becomes an addict.

With regard to risk taking behaviour, the researcher found that at the institution which is the focus of this study, there is a high prevalence of unplanned pregnancies. Pregnant students are often absent for long periods of time, making it difficult for them to catch up with missed work and to cope with the academic pressures of studying full time and having a child. In a population based survey with South African youth aged between 18 and 24 years, Seutlwadi *et al. (*2012) found that although the participants had knowledge of contraceptives, it was not a strong determinant of contraception use and that having an unplanned pregnancy was not a motivation to use birth control.

A student who is preoccupied with problems in the family cannot focus all his/her attention on studies and this could lead to poor academic performance. Relationships could also influence students' emotional wellbeing. There is an association between relationship break-ups and poor academic performance as found in a study by Field *et al*. (2012a). The study revealed that break-up stress has an effect on students' concentration, homework, performance in tests and their results (Field *et al.*, 2012a).

2.7.2.3 Inflexibility in the curriculum

When students are unable to access the curriculum, it leads to a breakdown in learning. Key components of a curriculum are the teaching style of the lecturer, the tempo at which teaching and learning takes place, the learning style of the students, the complexity of the content, the way the lecture room is managed and the learning material and equipment used in the teaching and learning process (Anon, 2013). According to Kruger and Van Schalkwyk (1997:18) it is the task and responsibility of an

educator (lecturer) to manage the interaction between learning objectives, learning content, lecturer, student and teaching-learning actions in such a manner that effective lecturing takes place. At the institution which is the focus of this study, there is a very strong emphasis on social constructivism and the requirement that students should be active participants in the learning process (cf. 2.6.3). It is recommended that lecturers do not revert to the “chalk and talk” method of teaching to achieve the outcomes of the particular subject. Yet the researcher has observed that there are many lecturers who still adopt this approach. An inflexible teaching approach may in itself create a barrier to learning for students. If students do not feel comfortable asking questions in class or approaching a lecturer, it could lead to poor academic performance. In the higher education environment teaching often takes place in very large groups and this could lead to students feeling “lost” in class. When students cannot keep up with a fast pace of learning, they fall behind and struggle to catch up.

The accessibility of learning material also poses a challenge to many students. Textbooks are too expensive or they struggle to read and comprehend the content. Since many students are English Second Language learners and textbooks are mostly in English this could propose a challenge for them to fully comprehend the content (cf. 2.7.2.4).

These factors add to the inflexibility of a curriculum, creating a situation where the needs of students are not always taken into consideration. To create an inclusive tertiary environment, aspects such as curriculum design, teaching style, learning material and assessment methods need to be addressed and accommodations need to be made to include students who experience barriers to learning.

2.7.2.4 Language barriers and academic literacy levels

For many English Second Language (ESL) higher education students in South Africa their academic performance is influenced by their poor command of English. In the study by Steyn and Kamper (2011) it was found that black ESL students at a particular institution reported problems in following lectures, understanding their study material and expressing themselves to fellow students and lecturers, mainly due to their limited proficiency in English. These students feel inferior because they do not have the language skills needed in the academic environment. Cummins made the distinction

between two different types of language proficiency, namely BICS (Basic Interpersonal Communication Skills) and CALP (Cognitive Academic Language Proficiency). BICS is used to communicate with people in everyday situations, whereas CALP is needed for academic purposes such as reading, understanding and applying theory. Basically, Cummins's theory asserts that while many non-native speakers have developed the surface skills of listening and speaking (BICS) in a language, they might not have the cognitive academic proficiency (CALP) needed to cope with the academic demands of a subject area. Students need to develop conceptual knowledge in their native language (L1) to make input in a non-native or second language (L2) comprehensible. CALP can be reached in a second language (L2) after at least 5 -7 years exposure to the second language, and only once the CALP has been reached in the native language (L1) (Cummins, 1991:166). Research by Paxton (2009) at a South African university found Cummins's theory to be true. Students from different home language groups had to complete worksheets by reading a passage which focused on certain concepts in their specific subject field, explaining the concepts in English and then in their home language, and then provide examples of how they would use these concepts in an English sentence as well as a sentence in their home language. The students explained the concepts by using everyday language (BICS) and demonstrated a lack of academic language (CALP). This study revealed that students struggle with conceptual meanings and that learning of a specific subject field is restricted by the use of English only. Students resort to rote learning because they do not fully understand what they read in English in their subject fields (Paxton, 2009). Webb (2002) asserts that language is crucial in academic development as students have to develop language skills specific to their subject field which includes the vocabulary, the ability to read and grasp scientific texts, formulate arguments and the appropriate use of academic terms. Furthermore, students have to be able to communicate effectively in various contexts and situations. Language either facilitates or becomes a barrier to academic development. At the institution which is the focus of this study, Erasmus (2008) found that students prefer to be taught in English as it is associated with social, educational and employment opportunities and that the majority of students are uninformed about the importance of becoming a competent mother-tongue speaker in order to acquire a second language effectively. The majority of respondents in Erasmus' s study indicated that they valued being able to speak English more than being able to write in English, which is problematic in the academic situation where assessment relies mostly upon the student's ability to express himself in written language. Yet, students do not perceive

English as medium of instruction to be a barrier to academic achievement. This demonstrates a lack of insight which could prevent them from getting the necessary language support they need.

At four South African universities, first year students are required to write an academic literacy test in both Afrikaans (TAG - Toets van Akademiese Geletterdheidvlakke) and English (TALL - Test of Academic Literacy Levels). The results indicate which students should take an academic literacy support course, or in rare cases, those students who should be denied access to the university based on an academic literacy level which is too low.

The TALL and TAG are not administered at Universities of Technology (UOT). Students enrolling at UOT's do, however, write the National Benchmark Test (NBT) which measures the academic readiness of first year students in competency areas of academic literacy, quantitative literacy and mathematics, which has a direct impact on the ability of the student to succeed. The purpose of the NBT is to inform students and the staff at the university about the level of academic support that the student needs in order to successfully complete the course that the student enrolled for (NBT, 2013). Unfortunately, at the university which is the focus of this study, students do not always receive feedback on their NBT results and consequently are entered into courses which could set them up to fail. The NBT project was first launched in 2009 and the results indicated that fewer than half of students enrolled at universities at that time had the necessary academic literacy skills to succeed without support, and that there were exceptionally high drop out and low graduation rates among black students (MacGregor, 2009). At the university which is the focus of this study, the majority of students are black ESL learners. The report from this project suggested that universities be compelled to provide *in-depth* support in language development as the medium of instruction, which is English, was found to be the largest contributing factor to poor performance and low throughput rates. Unfortunately, this *in-depth* support is not being provided to students currently at the institution of focus.

2.7.2.5 Inadequate support services

Most Higher Education Institutions have a writing or language support centre and compulsory first year subjects such as academic literacy to help students with the academic demands of the tertiary environment. At the institution which is the focus of this study, Student Support Services provide counselling, career guidance, and learning support to students who are referred by lecturers or make appointments on their own. The question, however, arises how effective these support services are and whether staff can meet the demands placed on them by the large number of students who are in need of support (cf. 2.5). EWP 6 mentions that HEIs should have strategies to ensure that more students with special education needs have access to higher education, that HEIs should have flexible curriculums and assessment policies, and that the diverse learning needs of students should be recognised and addressed (SA, 2001). This document, however, does not give any guidelines as to how these requirements should be met or who should be responsible to implement these institutionally. Neither EWP 6 nor any subsequent documents mention the role of Student Support Services or how support services should operate in a Higher Education Institution. It is up to the discretion of the institution if and how support should be provided to students.

2.8 LEARNING SUPPORT

2.8.1 Learning support as a collaborative process

Collaboration is the act of working with another person or group of people to create or produce something (Oxford English Dictionary, 2010:277). In terms of education, collaboration could mean different things. Firstly, it can refer to students working together (cf. 2.6.3). According to Lai (2011:2) collaboration between students can have a powerful effect on enhancing the learning of low-achieving students. Collaborative learning can enhance skills such as communication, conflict resolution, problem solving and negotiation. Secondly, it could also refer to professionals working together to support students in an inclusive setting. Learning support is not the work of an individual, but rather a team of professionals working together to provide the support that students need in order to achieve their academic goals. These professionals could include the subject lecturer, tutor and staff from Student Support Services.

Engelbrecht and Green (2007:177) describe transdisciplinary collaboration as a form of collaboration in which professionals from different fields perform certain functions that are related to one another. They work independently of one another but communicate on a regular basis. It involves the sharing of plans, ideas and expertise in an effort to achieve the mutual goal of service coordination and developing interventions that support one another. In a university setting, an example of transdisciplinary collaboration could occur when Student Support Services, lecturers and tutors work together to provide support to a student with a barrier to learning, e.g. a learning disability. Student Support Services might provide counselling and study support, the lecturers might provide accommodations in class to assist the student such as extra time and alternative assessments and the tutor could assist with revision and homework. The success of transdisciplinary collaboration lies in the commitment of professionals to teach and work across boundaries to implement support plans and a relationship of positive interdependence where each member's contribution to the support of the student experiencing a barrier to learning is seen as indispensable. (Engelbrecht & Green 2007; Nel *et al*. 2013).

2.8.2 Learning support in higher education

EWP 6 provides the foundation for implementing learning support in South Africa and it clearly states that students with special needs have a place in tertiary institutions. This includes issues such as appropriate physical access for physically disabled students, assistive technology for instance computers with large keyboards for students with vision problems, and audio taping of lectures (SA, 2001:31). To assist students with learning disabilities, trained staff should be available to provide support to these students, and through a process of collaboration between academic and support staff, create an inclusive environment.

The process of assessing or recognising a barrier to learning is important in providing the correct type of support that the student needs. According to Nel *et al*. (2012:47) students with barriers to learning should be identified as early as possible and the lecturer plays an important role in doing this. It might not necessarily be to assess the type of barrier that the student is experiencing because the lecturer might not be trained to do it, but to recognize that the student is experiencing a barrier and to help the student get the necessary support that he or she needs. In the classroom the lecturer

could provide support by simply adapting his/her teaching style to accommodate the different learning styles of students. Alternative types of assessment could be a way to support students e.g. allowing a student who finds it difficult to write a paper to rather do an oral assessment. When a problem presents itself which a lecturer is not able to deal with, there should be an effective referral process and feedback should be provided to the lecturer about the student's progress. Lecturers also need to be made aware of the different support systems that are available at the institution and be encouraged to utilise them.

2.9 CONCLUSION

This study aims to provide insight in how inclusive education works at a tertiary institution. In this chapter a description was given of what inclusion is and how it developed, globally as well as in South Africa. The theoretical framework underpinning inclusive education was described and the relevant literature revealed a gap with regard to inclusive education in tertiary education in South Africa. An overview was provided on the different barriers to learning that higher education students experience as well as learning support in higher education. An obvious conclusion that can be drawn from this chapter is that policies, processes and procedures should be put in place at HEIs since there are a vast number of students who experience different barriers to learning. Consequently, lecturers should also be informed and trained on how to support these students.

The following chapter will describe the research design, methods of data collection and data processing techniques used in the study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The central problem to this research study is to determine the opinions of lecturers regarding their role in supporting students who experience barriers to learning at a University of Technology. As mentioned in Chapter 1, a mixed methods approach was followed to answer the research questions. This chapter will elaborate on the design, choice of method and procedures used to do the research.

3.2 RESEARCH METHODOLOGY

3.2.1 Research paradigm

According to Creswell and Plano Clark (2007:21), all research needs a foundation for its inquiry, and therefore researchers need to be aware of the worldviews they bring to a particular study. Behind each study lies an assumption that the researcher makes about reality and the methods of obtaining knowledge, and especially for the mixed methods researcher it is important to reflect on the available worldviews or paradigms that may inform and provide validity for mixed methods enquiry (Creswell &Plano Clark, 2007:21).

This research focused on the opinions of lecturers regarding their role in supporting students who experience barriers to learning, determining whether lecturers are aware of these barriers and how they see their role in providing support to such students. The research problem lends itself towards a quantitative as well as a qualitative approach to collect relevant and valid data and information. The worldview that best fits this type of research is pragmatism, where the focus is on the consequences of the research, the primary importance of the research questions asked and multiple methods of data collection (Creswell & Plano Clark, 2007:23).

Pragmatism is orientated towards “what works” best in practice and provides the best understanding of the research problem, research questions and research

circumstances. In a pragmatic approach, researchers are free to choose the method that best meets their needs and purposes (Creswell, 2009:11).

3.2.2 Literature review

According to McMillan and Schumacher (2001:109) the review of literature serves several purposes in research, such as emphasizing the significance of the research problem, developing the research design, relating the study to previous knowledge and suggesting further research.

In compiling the literature chapter (Chapter 2) the researcher used various sources to collect information on the three key components of this research study, namely inclusive education, barriers to learning and learning support. Scientific books and articles from accredited academic journals were the main sources of information, as well as searches on web databases such as EBSCOHOST, ERIC and Google Scholar.

The key words that were used in the academic search included:

- inclusive education
- higher education
- disability
- academic performance
- barriers to learning
- learning support, and
- support services.

3.2.3 Research design

For the purpose of this research study the researcher made use of a mixed methods approach, in particular a sequential explanatory design.

3.2.3.1 Mixed methods approach

Creswell and Plano Clark (2007:4) define mixed methods research as a research design that can assume several worldviews and uses quantitative as well as qualitative methods. It is a procedure for collecting, analysing and “mixing” quantitative and

qualitative data within a single study in order to better comprehend the research problem (Creswell as referenced by Ivankova *et al.,* 2009:261). Leedy and Ormrod (2005:94) make a clear distinction between quantitative and qualitative research by defining quantitative research (cf. 3.2.4) as a traditional approach that is used to answer questions about relationships between different variables with the purpose of explaining phenomena. Qualitative research (cf. 3.2.5) is used to answer questions about the complex nature of a phenomenon, by describing and understanding the phenomenon from the participants' point of view.

The researcher chose a mixed methods approach to allow her to collect quantitative data by means of a self-designed questionnaire (cf. 3.2.4.1) as well as qualitative data through semi-structured interviews (cf. 3.2.5.1) with lecturers to gain an understanding of the participants' opinion about the phenomenon that is being investigated. The researcher could then compare and "mix" the findings from the quantitative and qualitative phase to address the research problem and answer the research questions in the best possible manner.

3.2.3.2 Sequential explanatory design

In this research study, the researcher first collected and analysed quantitative data, and thereafter a qualitative phase followed to further explain the results of the quantitative phase. Creswell (2009:211) describes this as a sequential explanatory design. According to Ivankova *et al.* (2007:265) the advantage of the explanatory design is that it is straightforward to implement and the steps fall into clear, separate stages. The disadvantage of this design is that it is a timeous procedure.

The following diagram illustrates the explanatory design as it was employed in this study.

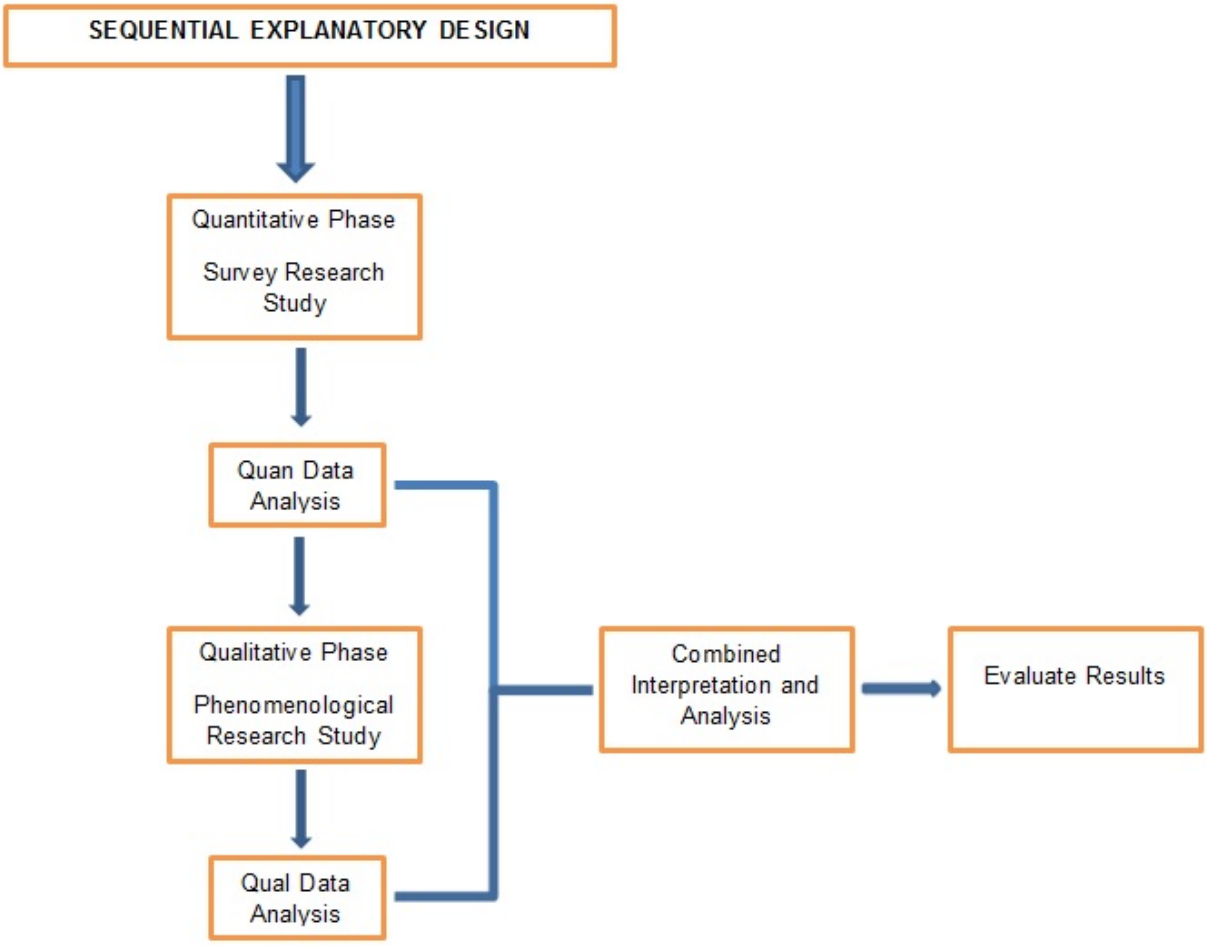

Figure 3.1 Sequential Explanatory Design

3.2.4 Quantitative phase

3.2.4.1 Survey research

In the quantitative phase, the researcher used survey research to collect data. Leedy and Ormrod (2010:187) describe survey research as a simple design in which the researcher poses a series of questions to participants, summarizes their responses with statistical methods and then draws inferences about the particular population from the responses of the sample.

The researcher collected data by means of her own designed questionnaire. The following steps as proposed by Esselen *et al.* (2005) in designing the questionnaire were followed:

- Formulate the research questions and the aims of the research – what does the researcher wish to ascertain and what are the intended goals of the study (cf. 1.4)
- Define the target population – who the intended study is aimed at (cf. 1.7, 3.2.7)
- Formulate the questions in order to answer the research questions – list all information needed to answer the research questions, adapt and refine questions and formulate own questions (cf. 1.4)
- Organise the questions – in logical order and in a manner that is interesting to the respondent.
- Consult experts in the specific field of study to determine whether all relevant issues are addressed and the questions are understandable and unambiguous.
- Conduct a pilot study with a small group of respondents similar to those in the target population to be able to identify and rectify problems such as questions that are unclear or irrelevant, sections of the questionnaire which are too long, prior to the survey being conducted.
- Adhere to ethical standards by respecting the right of the respondents to choose whether they want to take part in the survey, giving them the option to withdraw from the study at any time, not coercing respondents in providing information and giving them the assurance of their anonymity and that the information will be treated in a confidential manner.

The questionnaire was a Likert-scale type questionnaire designed with the aim to determine lecturers' knowledge about barriers to learning and their opinions regarding their role in providing support to students who experience barriers to learning. The content of the questions was directed by the literature review. The scale was divided into four options, namely strongly agree, agree, disagree and strongly disagree. The researcher chose to exclude a neutral option, as the purpose of the questionnaire was to determine an opinion about the topic. According to Leedy and Ormrod (2005:187) a "no opinion" or neutral response could have implications for the research, as it allows respondents to "straddle the fence" by simply choosing the neutral option.

All of the completed questionnaires were usable and therefore were tallied, percentages calculated and frequencies displayed in tables and graphs to help visualize the findings (cf. Chapter 4). This enabled the researcher to interpret the findings and determine the

level of knowledge that lecturers have about barriers to learning as well as the opinions of lecturers regarding support to students who experience barriers to learning.

3.2.4.2 Validity and reliability

The researcher conducted a pilot study of the questionnaire to ensure that it was understandable and to identify any problems or misinterpretations of the questions before distributing it to the target population. The pilot study involved ten people who completed the questionnaire and commented on the clarity, wording of the questions and the logical flow of the questions. The researcher used these comments to refine and set a final version of the questionnaire. With a pilot study, there is no need to statistically analyse the data, as the main purpose of a pilot study is only to determine whether the questions are clear and unambiguous.

The quantitative data collected by means of the questionnaire were submitted to a statistician at the North-West University Vaal Triangle Campus. This was done to ensure an accurate, reliable and valid statistical analysis of the data. The data were analysed with a computer program called Statistical Package for the Social Sciences (SPSS) version 20. The Cronbach alpha coefficient for each construct in the questionnaire was calculated. Cronbach alpha is a measure of internal consistency - how closely a set of items in a group relate to one another. The Cronbach alpha scores are given in Chapter 4 (cf. 4.2.1).

3.2.5 Qualitative phase

3.2.5.1 Phenomenological research

The researcher chose to make use of a phenomenological research study in the qualitative phase. Creswell (2009:13) describes phenomenological research as a "*strategy of inquiry in which the researcher identifies the essence of human experiences about a phenomenon as described by participants.*" According to Johnson and Christenson (2012:48) the goal of the researcher in phenomenological research is to enter the inner world of the participants to understand their perspectives and experiences.

The researcher conducted individual semi-structured, open-ended face-to-face interviews with fifteen lecturers, randomly chosen from the respondents who had completed the questionnaire. The researcher recorded the interviews with a digital voice recorder which enabled transcription of the audio files. According to Leedy and Ormrod (2010:184), face-to-face interviews have the advantage of enabling the researcher to establish rapport with the participants and gain their cooperation. This data were used to gain a deeper understanding of lecturers' opinions regarding their role in supporting students who experience barriers to learning at a University of Technology.

The following steps were followed in the phenomenological study:

- Data collection

  According to Leedy and Ormrod (2005:143) data collection in qualitative research takes a great deal of time and requires a thorough, accurate and systematic approach by the researcher.

  In the second phase of data collection, fifteen lecturers participated in individual, semi-structured, face-to-face interviews. The aim of the interviews was to confirm the findings obtained from the questionnaires. According to Tesch (*in* Leedy & Ormrod, 2010:141) the phenomenological interview is often an unstructured one in which the researcher and participants work together to arrive at the "heart of the matter". The researcher used semi-structured interviews within the phenomenological study which comprised of a set of standard questions, one or more questions aimed at the specific interviewee, and probes to gain a deeper understanding of the lecturers' views and opinions about the topic (Leedy & Ormrod, 2005:184).

- Data analysis

  During data analysis in a phenomenological study, the researcher searches for specific statements that are relevant to the phenomenon being studied (Johnson & Christenson, 2010:387).

In the qualitative phase of the study, the interviews were recorded and then transcribed. While reading through the interview transcriptions and keeping the research questions in mind, the researcher identified statements relating to the topic and made notes in the margins. These notes were basically key words and descriptive phrases for each meaningful segment in the transcripts. This process is called coding (Merriam, 2009:178; Nieuwenhuis, 2007:105). Coding helps the researcher to quickly and easily retrieve specific pieces of the data (Merriam, 2009:173). Content analysis was used to identify recurring statements and themes. Using the marginal notes and comments, the researcher grouped the notes and comments that seemed to fit together into different categories and assigned a name to each category. According to Merriam (2009:183) the construction of categories is an inductive process – segments of data are clustered together and named. Throughout the qualitative data analysis and the construction and naming of the categories, the researcher constantly compared the data obtained through the questionnaire with the data from the transcriptions to determine similarities and differences, a process which Merriam (2009:175) describes as the constant comparative method of data analysis.

- Report writing

  Kumar (2005:266) states that research writing must be absolutely accurate, clear and free of ambiguity, logical and concise. Report writing was the last step of the research process in which the researcher described the data collected during the questionnaires and interviews, and drew conclusions from the findings. Finally, the researcher made recommendations with regard to support structures that could be implemented to assist students at the University of Technology in this study to overcome barriers to learning and achieve academic success.

3.2.5.2 Trustworthiness, validity and reliability

The term trustworthiness and validity are used interchangeably in qualitative research. According to Johnson and Christenson (2010:264) research validity refers to qualitative research that is “plausible, credible, trustworthy, and therefore defensible.” Creswell

(2009:190) distinguishes between qualitative validity and qualitative reliability as these two terms do not have the same meaning in qualitative research as in quantitative research. Qualitative validity means that the researcher checks for the correctness of the findings by taking certain measures, while qualitative reliability indicates that the researcher used a consistent approach throughout the research project. Qualitative validity and reliability can be achieved by ensuring that the research is trustworthy.

The researcher addressed the following four principles of Guba (*in* Shenton, 2004:64) to ensure the trustworthiness of the qualitative research phase:

- Credibility

Credibility refers to the degree to which the results could be confirmed by others. In order to promote credibility of the qualitative findings, the researcher made the following provisions (Shenton, 2004:64 -72). The researcher:

- familiarised herself with the participants before conducting the interviews by contacting (via e-mail and telephone) the lecturers who indicated that they were willing to participate in an interview;
- used random sampling to choose participants for the interviews to ensure a representative sample of the larger group who took part in the quantitative phase of the study;
- used mixed methods to confirm the results; a questionnaire preceded the individual interviews;
- ensured the honesty of the participants by encouraging the interviewees to be frank and honest, establishing rapport with the interviewees in the opening moments before the questioning, indicating that there were no right or wrong answers to the questions that would be asked, and by making it clear that they could withdraw from the study at any time without giving a reason for their decision;
- used iterative questioning to explore the participants' answers by frequently returning to matters previously raised, and rephrasing the questions;
- inspected the information and obtained feedback from her study supervisor to challenge any false assumptions or ascertain if any relevant information might have been missed during the qualitative analysis, and

- examined previous research findings by relating her findings to existing literature on the topic.

- Transferability

Transferability is related to the idea that research findings and conclusions should be applicable to other situations and populations. In qualitative research, the findings and conclusions are relevant to a specific environment and the individuals who participated in the research, making transferability impossible (Shenton, 2004:69). The researcher aimed to promote transferability by providing detailed theoretical background information on the phenomenon investigated to enable the reader to make inferences about the findings and compare these to the existing information.

- Dependability

Dependability refers to the extent that the study would yield the same results if it were to be repeated. According to Shenton (2004:71), to address dependability, the processes that were followed to collect data in the study should be reported in a very descriptive manner, thus enabling a future researcher to repeat the study. The researcher gave an in depth description of the methodology followed in order to allow for a future repeat of this research study.

- Conformability

Conformability refers to the degree to which the results can be confirmed by others. Shenton (2004:72) states that it is the responsibility of the qualitative researcher to take the necessary steps to ensure that the findings of the research are the result of the experiences of the participants, and not the characteristics and preferences of the researcher. The researcher made use of a mixed methods approach to alleviate the effect of any false findings, and her supervisor acted as an auditor to ensure that the researcher remained objective and neutral. The researcher also kept detailed records that would allow for an independent review of the data collection and procedures that were followed to analyse the data.

3.2.6 The role of the researcher

According to Maree and van der Westhuizen (2007:41), the role as researcher should empower her to enter into a collaborative partnership with the respondents in order to collect and analyse data, with the main aim of creating understanding of the investigated phenomena. Throughout this study, the researcher played an active role in the following aspects as proposed by Joubert (as referenced *in* Maree & van der Westhuizen, 2007:41).

The researcher:

- Gained entry to the research site and addressed ethical issues by requesting permission from the relevant parties involved in the study which included the university research ethics committee and the participants in the research (cf. 3.2.9).
- Employed strategies to ensure the validity and reliability of the research instruments and data gathered:
  - Explained the research study in the informed consent form which was attached to the questionnaire.
  - Was not present while lecturers were completing the questionnaire, thus none of the lecturers could feel obliged to answer in a certain manner.
  - Assured participants of their anonymity in the research study and that all information would be treated confidentially.
  - Chose the lecturers who participated in the interviews in the qualitative phase randomly (cf. 3.2.7)
- Compiled the questionnaire.
- Administered the questionnaire to the different departments.
- Set interview questions.
- Conducted interviews with a sample of lecturers.
- Analysed the data.
- Established the link between the quantitative and qualitative data.
- Wrote the research report.

The researcher aimed to remain objective and unbiased whilst conducting the research and writing the research report.

3.2.7 Population and sampling

The population used for this research study consisted of all lecturers who teach first year to post-graduate students in the four faculties of the University of Technology which is the focus of this study. The university requested to remain anonymous. The researcher used both purposive and random sampling. In purposive sampling the researcher chooses individuals with specific characteristics representative of the population of interest, in this case university lecturers (Johnson & Christenson, 2012:231). Two hundred questionnaires were distributed to lecturers teaching in different departments across the university (cf. 3.2.8). The reason for choosing purposive sampling is that the researcher wanted to determine the opinions of lecturers who are in contact with students who experience barriers to learning, not only in a specific faculty, but across the different faculties and academic departments in the university. Random sampling was done to select fifteen participants for the individual semi-structured interviews (cf. 3.2.8).

3.2.8 Data collection procedure

The researcher obtained ethical clearance and permission to conduct the research from the research ethics committee at the University of Technology which is the focus of this study. The informed consent form clearly stated that participation was voluntary and anonymous. A review of the relevant literature on the topic was done (cf. 3.2.2). The researcher applied a mixed methods approach, using a sequential explanatory design in which quantitative data were collected in the first phase by means of a self-designed Likert scale questionnaire (cf. 3.2.7).

The researcher followed the following procedure for distributing the questionnaires and collecting the quantitative data:

- The researcher contacted the administrator of each academic department on campus and kindly requested their assistance in collecting the data. Firstly, each administrator was asked to reply in an e-mail indicating the number of lecturers in their department.
- After the researcher had received the replies, she photocopied the necessary number of questionnaires and informed consent forms to be handed out in each

department. In total, 200 hard copy questionnaires were distributed to the different academic departments.

- The researcher went to each department, and with the assistance of the administrator, handed out the questionnaire personally to each lecturer or placed it in the lecturer's pigeon hole.
- Each departmental administrator was given two envelopes, one for the questionnaires and a second for the informed consent forms. The informed consent form was attached to the questionnaire, but could be handed in separately to protect the anonymity of the respondent.
- Each departmental administrator then forwarded an e-mail written by the researcher to all the lecturers in the specific department. The e-mail explained the purpose of the study, requested the participation of the lecturers and specified a date two weeks after the questionnaire had been handed out, and a collection point (the desk of the departmental administrator) for the questionnaires to be returned.
- The researcher stayed in contact with the administrators and after two weeks visited each department to collect the questionnaires.
- Owing to the very low return rate, the researcher wrote a second e-mail which was forwarded by the departmental administrators, requesting the participation of the lecturers and attached the questionnaire, giving lecturers the option to complete the questionnaire and send it back electronically to the researcher. A second date was given for the return of outstanding questionnaires.
- On the second date set for collecting questionnaires, the researcher went to each department and collected the questionnaires.
- The researcher remained in contact with the departmental administrators and collected any questionnaires which were returned late.
- The final number of questionnaires which were returned was 45, yielding a response rate of 22.5%.
- Each questionnaire was given a number from 1 – 45.

One of the drawbacks of using a questionnaire is that most people who receive them do not return them and thus the return rate may be very low (Leedy & Ormrod, 2010:189). Baruch and Holtom (2008:1141) state that the two main reasons for low response rates in survey research are failure to deliver the questionnaires to the target population and

the reluctance of people to respond. The researcher did everything in her power to ensure that lecturers received the questionnaire and she motivated her request and the importance of their participation in the study in the e-mail and informed consent form which was attached to the questionnaire. Participation in the study was voluntary (cf. 3.2.9) and the researcher could not foresee the low response rate. The researcher did, however, collect rich data during the qualitative phase of the study.

The researcher sorted through the questionnaires which were returned and identified thirty lecturers out of the 45 who indicated that they would be willing to participate in a follow up interview. According to Leedy and Ormrod (2005:139), the sample size in a phenomenological study is typically between five and 25 participants. Random selection means that each member has an equal chance of being selected (Leedy & Ormrod, 2005:199). The researcher chose a random sample of fifteen lecturers to participate in the individual semi-structured face-to-face interviews by placing the numbered questionnaires of the willing participants in ascending order. The researcher numbered these questionnaires 001; 002 up to 030 and drew every second questionnaire (30 ÷ 2 = 15). Those lecturers were contacted and asked to participate in an interview. In the end fifteen lecturers who had been originally asked, gave consent and the interviews were conducted at a convenient time which suited them. The purpose of the interviews was to gain more in-depth data than what had been provided in the quantitative results (cf. 3.2.3.2). The interviews were recorded and transcribed, and coding of the transcriptions led to the identification of themes and subthemes.

3.2.9 Ethics

It is of utmost importance that any researcher in a specific discipline maintains the highest possible ethical standards. According to Creswell (2009:87), the researcher needs to foresee ethical issues that may arise during the research. During this research data were collected about the opinions of lecturers regarding the provision of support to students who experience barriers to learning.

Trochim (2006) highlights the following ethical issues that may arise in social research:

- Voluntary participation – people may not be coerced into participating in the research. The researcher ensured that the potential participants were informed that their participation was voluntary and that they were under no obligation to participate. Furthermore, participants were informed that if they agreed to participate, they had the right to withdraw from the study at any time.

- Informed consent – the research participants were fully informed about the procedures and signed informed consent forms that described the nature of the research project as well as the nature of the participants' involvement. The form also allowed the researcher to know their personal contact details if they were willing to participate in the interviews during the qualitative phase of the study.

- Confidentiality – participants were assured that all identifying information would not be made available to anyone except the researcher.

- Anonymity – the identities of the participants remained anonymous throughout the study, with the exception of the participants for the interviews in the qualitative phase of the study.

The researcher ensured that the data were handled confidentially and that the collection of the data did not infringe on the time and privacy of the participants. An ethical application was submitted to the Faculty of Human Sciences Research Committee of the North West University and approved in February 2012 (cf. 1.2) (Addendum A). In February 2013, the researcher submitted an ethical application to the Research and Innovation Ethics Committee of the University of Technology that participated in the research. The application was approved, allowing the researcher to conduct the research at the campus (Addendum B).

3.3 CONCLUSION

This chapter explained the research methodology followed in this study and entailed a description of the research design, population and sampling, data collection methods and the measures that were taken to ensure the trustworthiness of the study. The ethical aspects pertaining to the research were also discussed.

Chapter 4 will explain the analysis of the data, the findings and conclusions concerning the opinions of lecturers regarding their role in supporting students who experience barriers to learning at a University of Technology.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

In this chapter, the analysis and interpretation of the quantitative data which were collected by means of questionnaires, as well as the qualitative research which was collected through interviews, will be discussed. Firstly, the results of the questionnaire will be given and interpreted. Thereafter, the themes emerging from the interviews which were recorded and transcribed will be discussed. Finally the findings of both sets of data will be merged in an explanatory manner.

4.2 QUANTITATIVE DATA ANALYSIS

4.2.1 Research instrument and reliability of the results

A self-designed Likert scale questionnaire was used to collect quantitative data. The questionnaire was divided into seven constructs consisting of several questions aimed at answering the research questions posed at the onset of the study.

Reliability refers to the consistency with which a measuring instrument, in this case the self-designed Likert scale questionnaire, yields a result (Neuman, 2011:214; Pietersen & Maree, 2007:216 ; Leedy & Ormrod, 2010:29). The reliability of the research instrument was measured with the Cronbach Alpha coefficient, based on the inter-item correlations (Pietersen & Maree, 2007:216). If the items of the test are correlated to one another, the value of alpha is higher. However, Tavakol and Dennick (2011:53) argue that a high Cronbach Alpha coefficient does not always reflect a high degree of consistency as alpha is affected by the length of the test. If the test length for a specific construct is too short, the alpha will be low. The alpha can be increased by adding more related items that test the same concept. In the case of construct 2 and 4 that yielded a Cronbach Alpha score below 0.7 (cf. Table 4.1), both constructs respectively consisted of five test items which could have attributed to the lower Cronbach Alpha score. More

test items could not be added to the construct as the Cronbach Alpha coefficient was determined after the quantitative data collection and statistical analysis**.**

The following table represents the internal reliability, mean and standard deviation for each construct in the questionnaire.

Table 4.1 Cronbach's Alpha Coefficient, Mean and Standard Deviation of constructs in the questionnaire (cf. Addendum D)

Construct	Question number	Cronbach Alpha Coefficient	Mean	Standard Deviation
1. Knowledge of inclusive education	2	.890	1.56444	.372705
2. Knowledge of barriers to learning	3	.609	1.57778	.424740
3. Identification of barriers to learning	4	n/a	n/a	n/a
4. Personal beliefs regarding students with barriers to learning	5	.673	2.51556	.477663
5. Level of comfort with students who experience barriers to learning	6	.767	2.1556	.737180
6. Perceived institutional support	7	.754	2.48889	.609686
7. Provision of reasonable accommodations	8	.842	1.76162	.423878

In question 4 that represents construct 3 "Identification of barriers to learning", no statistical analysis is applicable as this question is not a Likert scale type question.

4.2.2 Biographical information of participants

4.2.2.1. Age

Table 4.2: Age

22 – 35		36 – 45		46 – 55		56-65	
f	%	f	%	f	%	f	%
9	20	16	36	10	22	10	22

"f" indicates the number of respondents out of a total of 45.

The above table indicates that:

- 36% (16 out of 54) of respondents are between 36 and 45 years of age.
- 20% (9 out of 45) of respondents are between 22 and 45 years of age.
- 22 % (10 out of 45) of respondents are between 46 and 55 years and
- 22% (10 out of 45) are between 56-65 years of age.

4.2.2.2 Gender

Table 4.3: Gender

Male		Female	
f	%	f	%
15	33	30	67

The above table indicates that 67% (30 out of 45) of the respondents are female lecturers and 33% (15 out of 45) are male lecturers.

4.2.2.3 Race

Table 4.4: Race

African		White		Indian		Coloured	
f	%	f	%	f	%	f	%
11	25	30	68	3	7	0	0

The above table indicates that 68% (30 out of 45) of the respondents are White, 25% (11 out of 45) are African, 7% (3 out of 45) are Indian and 0% are Coloured.

4.2.2.4 Qualification

Table 4.5: Qualification

Diploma		B-degree		Honours		Masters		Doctorate	
f	%	f	%	f	%	f	%	f	%
1	2	4	9	7	16	29	64	4	9

The above table indicates that:

- 2% (1 out of 45) of respondents have a diploma
- 9% (4 out of 45) of respondents have a Bachelor's-degree
- 16% (7 out of 45) of respondents have an Honours degree
- 64% (29 out of 45) of respondents have a Master's degree
- 9% (4 out of 45) of respondents have a Doctorate.

4.2.2.5 Experience

Table 4.6: Experience

1- 5 years		6 -10 years		11 – 15 years		16 – 20 years		20 + years	
f	%	f	%	f	%	f	%	f	%
19	42	11	24	8	18	4	9	3	7

The above table indicates that:

- 42% (19 out of 45) of respondents have between 1 and 5 years of higher education teaching experience.
- 24% (11 out of 45) of respondents have between 6 and 10 years of higher education teaching experience.
- 18% (8 out of 45) of respondents have between 11 and 15 years of higher education teaching experience.

- 9% (4 out of 45) of respondents have between 16 and 20 years of tertiary teaching experience.
- 7% (3 out of 45) of respondents have more than 20 years of tertiary teaching experience.

4.2.2.6 Faculty

Table 4.7: Faculty

Human Sciences		Applied and Computer Sciences		Engineering and Technology		Management Sciences	
f	%	f	%	f	%	f	%
30	67	6	13	4	9	5	11

The above table indicates that:

- 67% (30 out of 45) of respondents are lecturers in the faculty of Human Sciences.
- 13% (6 out of 45) of respondents are lecturers in the faculty of Applied and Computer Sciences.
- 9% (4 out of 45) of respondents are lecturers in the faculty of Engineering and Technology.
- 11% (5 out of 45) of respondents are lecturers in the faculty of Management Sciences.

4.2.2.7 Conclusion

From the above biographical information it can be summarised that the majority of the respondents were females above the age of 45 years. Most of the respondents have a Masters Degree and teach in the Faculty of Human Sciences, with more than five years of teaching experience. Although in this study, the gender issue does not have a major impact on the findings, the larger response could indicate that the female respondents are more open to the issue of inclusive education and might therefore be willing to be incorporated in changing the Higher Education Institution into a more inclusive environment. The high qualification rate allows for the assumption to be made that all the respondents should be able to gain an understanding of what barriers to learning

entail, as well as acquire skills on how the needs of students experiencing barriers to learning can be accommodated.

4.2.3 Relationship between the identified themes and the constructs

During the analysis of the quantitative data, the researcher kept the research questions in mind and found that the different constructs of the questionnaire could be grouped together under three themes.

Table 4.8: Themes emerging from quantitative data analysis

Theme	**Construct**
i) Lecturers' knowledge and awareness of barriers to learning	1. Knowledge of inclusive education. 2. Knowledge of barriers to learning. 3. Identification of barriers to learning.
ii) Perception of the lecturer's role in providing support and own efficacy in providing support	4. Personal beliefs regarding students who experience barriers to learning. 5. Level of comfort with students who experience barriers to learning. 7. Provision of reasonable accommodations.
iii) Perception of what is needed to provide support	6. Perceived institutional support.

These themes formed the basis of the questions asked during the semi-structured interviews in the qualitative phase of the study.

4.2.3.1 Theme 1: Lecturers' knowledge and awareness of barriers to learning

4.2.3.1.1 Construct 1: Knowledge of inclusive education

The figure below indicates the responses of the respondents to question 2 (cf. Addendum D). The question was introduced with the phrase "Inclusive education is about" followed by 15 statements related to inclusive education. Respondents had to indicate whether they strongly agreed, agreed, disagreed or strongly disagreed with each statement.

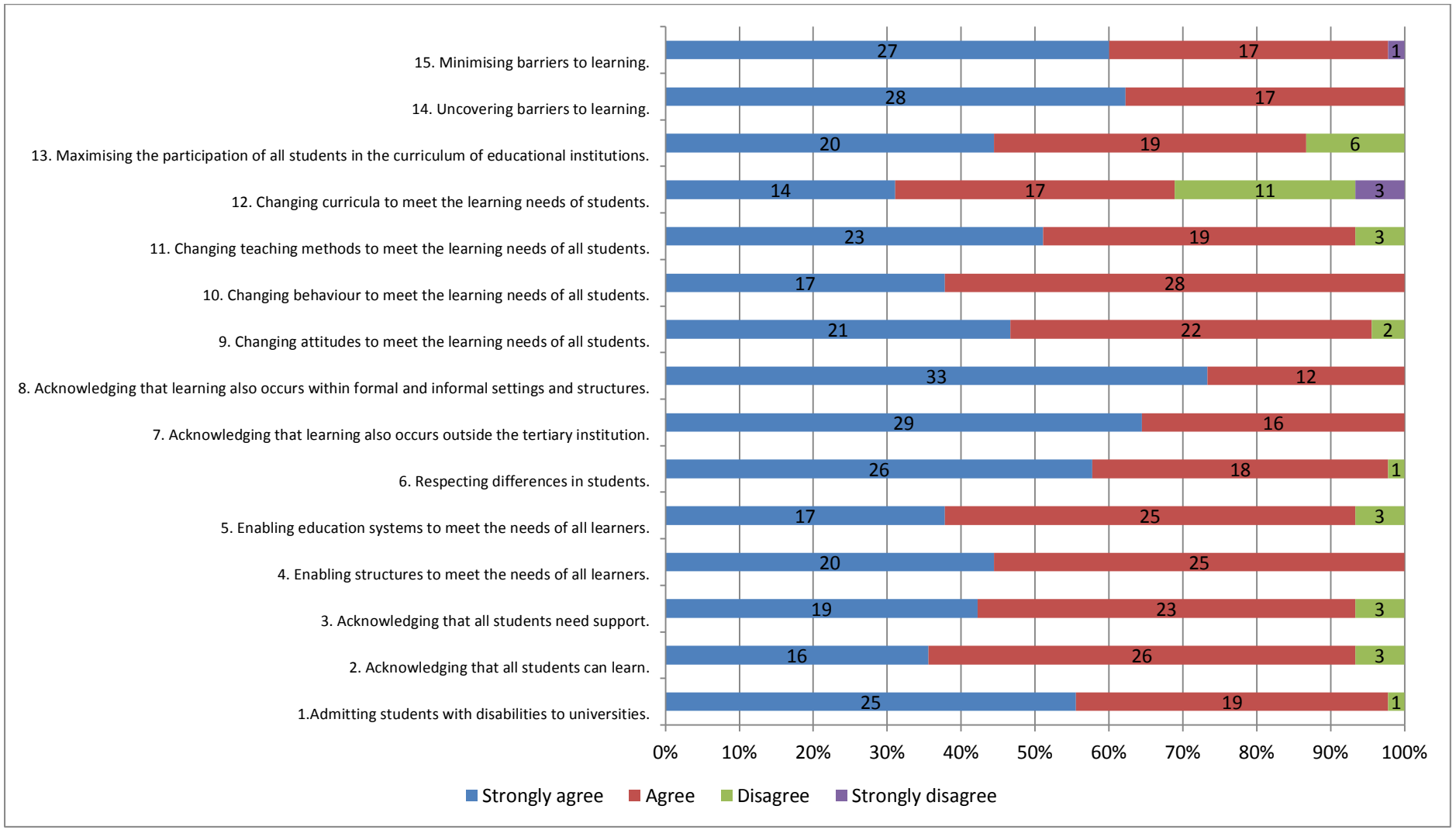

Figure 4.1: Knowledge of inclusive education

All of these statements, except for the first statement, were taken directly from Education White Paper 6 (SA, 2001). The purpose of this question was to determine the level of knowledge that lecturers believe they have regarding the principles of inclusive education. Supporting students who experience barriers to learning, implies that it occurs within an inclusive environment, and the purpose of the study is to determine the opinions that lecturers have regarding support to students who experience barriers to learning, and whether the institution of focus is an environment where inclusion is practised. The majority of the respondents strongly agreed or agreed with the 15 statements relating to inclusive education. It seems therefore that they are of the opinion that their knowledge about the principles of inclusive education is adequate. This could, however, not be a true reflection of their actual knowledge of inclusive education and the relevant policy document (EWP 6) as the respondents might be inclined to agree with a positive statement. The 15 statements were all worded in a positive direction, implying that the scale might be unbalanced in this question as there are not any statements worded in a negative direction. According to Rennie (1982) the tendency of respondents to respond to questions in a particular manner regardless of the content of the questions, is called response bias.

The question item that yielded the highest number of respondents to disagree or strongly disagree is question item 12. A total of 11 out of the 45 respondents (24%) disagreed with the statement in question item 12 "C*hanging curricula to meet the needs of students*". This appears to be a key issue for lecturers when dealing with students who experience barriers to learning in the sense that they seem hesitant to do anything that might compromise the curriculum (cf. 4.2.3.2.1). When comparing this response with the response to question item 1 under "Construct 4: Personal beliefs regarding students with barriers to learning", where 5 out of 45 respondents (11%) strongly agree and 20 out of 45 respondents (44%) agree that students with barriers to learning takes away quality education for others (cf. 4.2.3.2.1), it might be an indication that although lecturers believe that they are able to identify barriers to learning among students, they do not believe that it is in the best interest of the majority students to make any changes to the curriculum or their teaching style to accommodate students with barriers to learning. The curriculum in itself and lecturers' unwillingness to be flexible could be a major barrier to learning for all students (cf. 2.7.2.3). This assumption is confirmed by the few respondents who identified inflexibility in the curriculum to be a barrier to learning (cf. 4.2.3.1.3).

4.2.3.1.2 Construct 2: Knowledge of barriers to learning

The figure below indicates the responses of lecturers to question 3 (cf. Addendum D) regarding their knowledge of barriers to learning. The question consists of five statements related to barriers to learning." The respondents had to indicate whether they strongly agree, agree, disagree or strongly disagree with each statement.

"BTL" refers to barriers to learning.

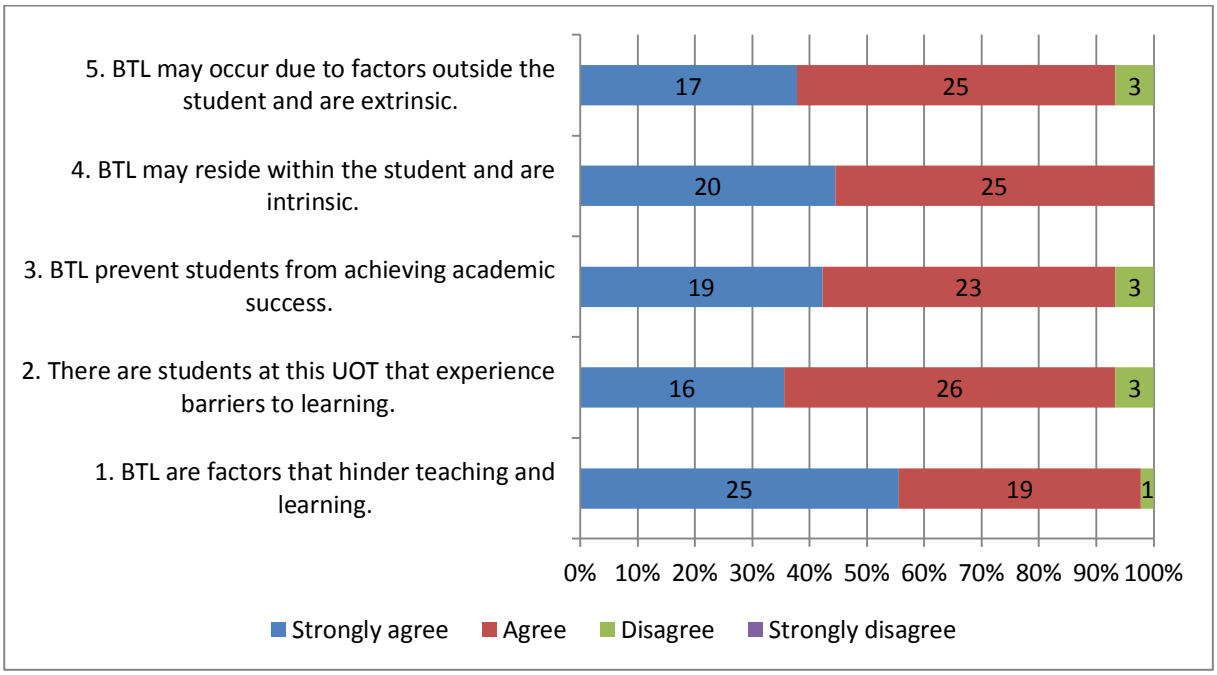

Figure 4.2: Knowledge of barriers to learning

In this question, lecturers were asked to indicate the extent to which they agree with statements relating to barriers to learning. The purpose of this question was to determine the level of knowledge that lecturers deem they have regarding what barriers to learning entail and the effect of these barriers on students' academic success. As seen in figure 4.2, it appears as if the respondents have a clear idea of what barriers to learning entail, as the majority strongly agree and agree with the statements related to barriers to learning. However, three respondents disagreed with question item 2 and 3, which may be an indication that there are lecturers who have limited knowledge of barriers to learning and are therefore not able to recognise these in the classroom. It could signify a need for training about barriers to learning, as not all academics who teach at the institution necessarily have a qualification in education; they may only be trained in their specific subject fields (cf. 4.3.1.2).

4.2.3.1.3 Construct 3: Identification of barriers to learning

The figure below indicates the responses of lecturers to question 4 (cf. Addendum D) regarding the identification of barriers to learning among students. The question was introduced with the following phrase:

"Please indicate if you have identified any students that experience the following barriers to learning during your time teaching at this institution. Mark the appropriate barriers with an X."

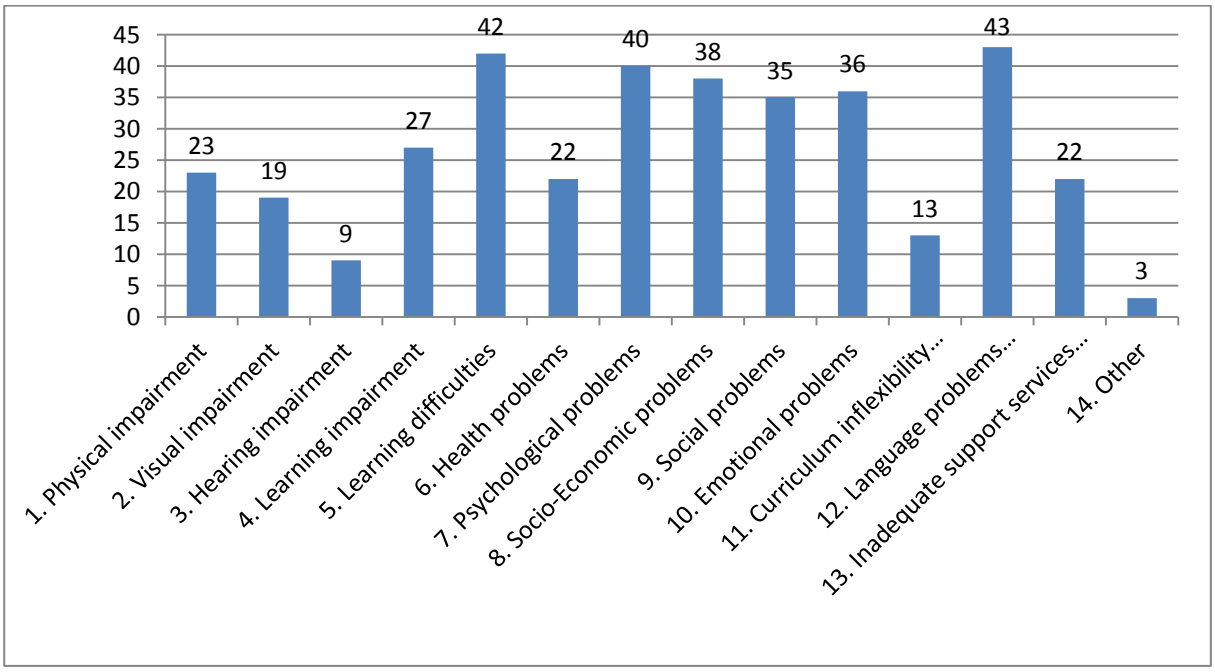

Figure 4.3: Identification of students who experience barriers to learning

In this question, the respondents had to identify barriers to learning among their students. A total of 43 out of 45 respondents (96%) indicated that the barriers which were found to be most common among students were language problems. A vast body of literature supports this finding (Webb, 2002; Paxton, 2009; MacGregor, 2009; Steyn & Kamper, 2011). The second most common barrier which was identified was learning difficulties. Much research has been done globally on the inclusion of students with learning disabilities and learning difficulties in higher education (cf. 1.1). It was found that the number of students who experience learning difficulties has increased over the past few years, and that higher education institutions are becoming aware of the fact that these students need support (Reupert *et al.*, 2010; Fuller *et al.*, 2004; Vogel *et al.*,

2007). In South African universities, learning difficulties have also been identified as a major barrier to learning among students (cf. 1.1; 2.5; 2.7.1.3). It is therefore clear that there are a significant number of students experiencing barriers to learning in higher education who are in need of support. Interestingly, only a few respondents (13 out of 45) indicated that inflexibility in the curriculum could be a barrier to learning. This supports the earlier finding in paragraph 4.2.3.1.1.

4.2.3.2 Theme 2: Perception of the lecturer's role in providing support and own efficacy in providing support

4.2.3.2.1 Construct 4: Personal beliefs regarding students who experience barriers to learning

The figure below indicates lecturers' responses to question 5 (cf. Addendum D), establishing lecturers' personal beliefs regarding students who experience barriers to learning. The respondents had to indicate the extent to which they agree with five statements related to students and barriers to learning.

"BTL" refers to barriers to learning

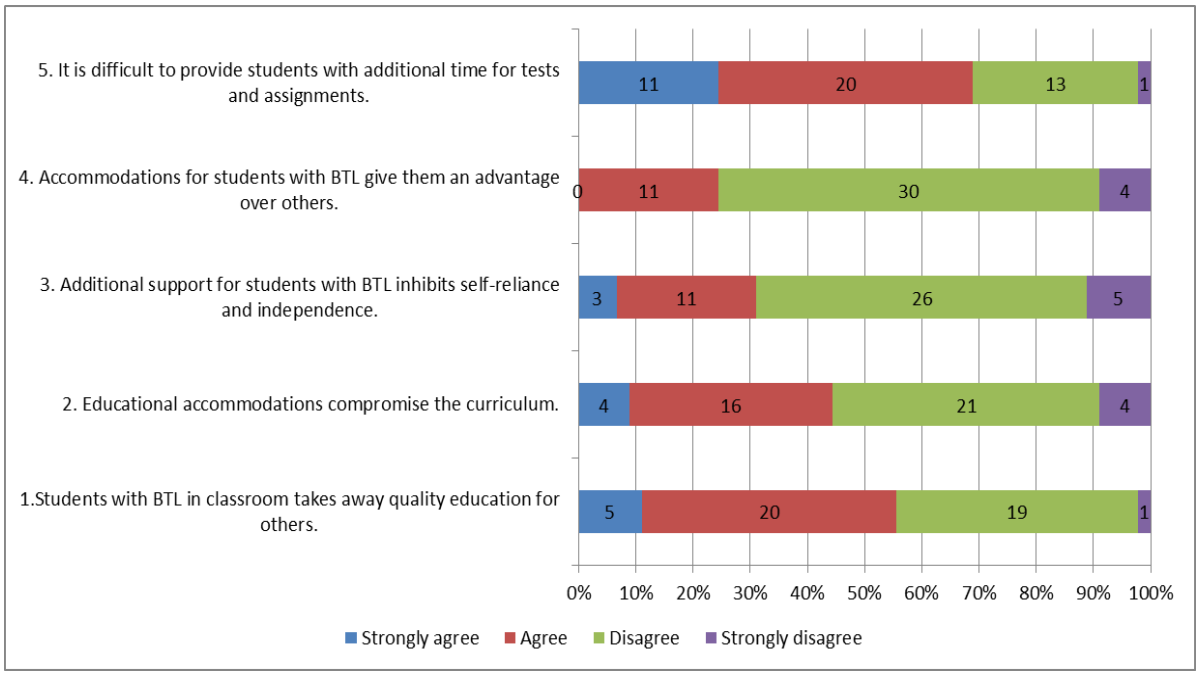

Figure 4.4: Personal beliefs regarding students who experience to learning

The purpose of this question was to determine the attitude of lecturers towards students who experience barriers to learning, and their willingness to provide educational accommodations to these students. The wording of the statements could be perceived as negative; the expectation being that if the respondents are “pro- inclusive education” as indicated in figure 4.1 (cf. 4.2.3.1.1) where all the respondents (except 1) strongly agreed and agreed with question item 14 and 15 that inclusive education is about uncovering and minimising barriers to learning, the majority of the respondents would disagree and strongly disagree with the five question items in this construct. However, quite a number of respondents indicated the opposite to be true. A total of 56% of the respondents (25 out of 45) either strongly agreed (5) or agreed (20) that having to accommodate students with barriers to learning can impact negatively on providing quality education to other students (question item 1). A total of 4 out of 45 respondents strongly agree and 16 out of 45 respondents agree that educational accommodations compromise effective delivery of the curriculum (item 2). This indicates that although lecturers might agree with the *idea* of uncovering barriers to learning and helping students to overcome these barriers, in practice it seems that they do not want to, or find it difficult to change their teaching practices and make accommodations because they believe that it might compromise the standard of the curriculum. However, an inflexible curriculum and the failure to make accommodations to meet the needs of students could create a barrier to learning in itself (cf.2.7.2.3).

4.2.3.2.2 Construct 5: Level of comfort with students experiencing barriers to learning

The figure below indicates lecturers’ responses to question 6 (cf. Addendum D) regarding their level of comfort with students who experience barriers to learning. The respondents had to indicate the extent to which they feel comfortable with three statements which present possible scenarios in dealing with students experiencing barriers to learning.

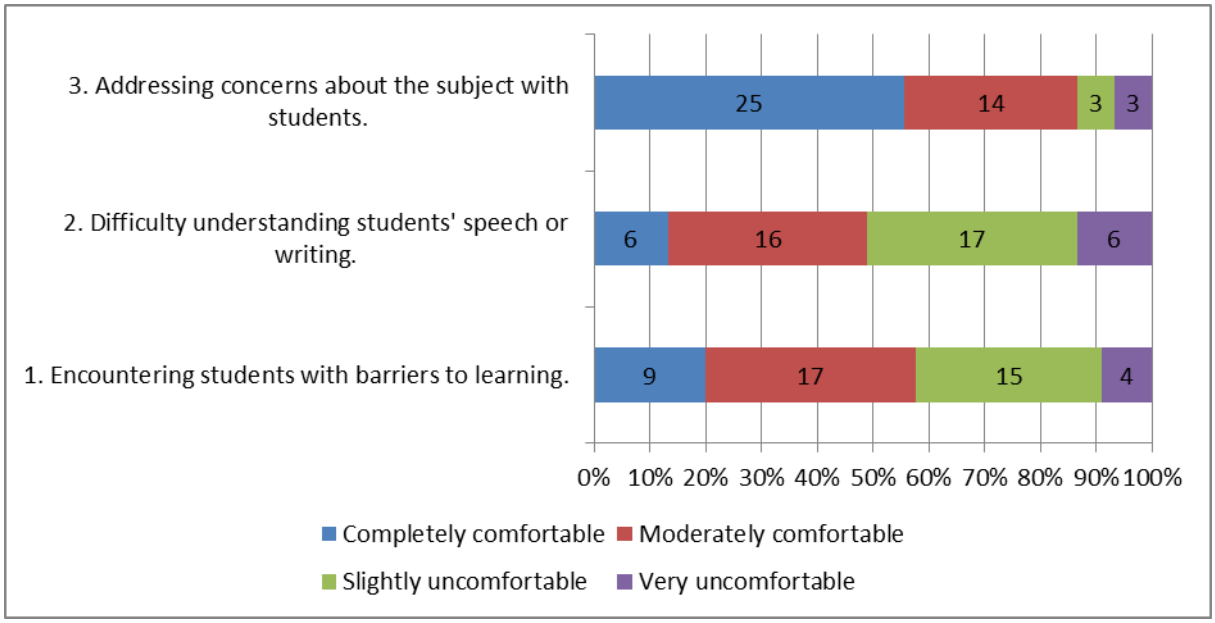

Figure 4.5: Level of comfort with students experiencing barriers to learning

It is the researcher's opinion that the level of comfort that a lecturer feels when dealing with students who experience barriers to learning, could have an influence on such lecturer's ability to effectively support the students, and consequently, on the lecturer's level of self-efficacy in providing support. Self-efficacy, a concept which developed from Bandura's Social Cognitive theory, refers to the belief in one's ability to organise and perform tasks to reach certain goals (Carr, 2004:210). Furthermore, Bandura postulates that self-efficacy beliefs develop through experience (Loreman *et al.,* 2013). When applied to a student support situation, the supposition would be that lecturers who regularly deal with students who experience barriers to learning will feel more comfortable and confident in their efforts to support these students. These lecturers would more likely be successful in helping students overcome their barriers and achieve academic success, and will have a higher level of self-efficacy in this regard. When looking at question item 1, 58% (27 out of 45) of the respondents indicated that they feel completely comfortable(9 out of 45) to moderately comfortable (17 out of 45) when they encounter students with barriers to , and 42% (19 out of 45) feel slightly uncomfortable (15 out of 45) to very uncomfortable (4 out of 45). In question item 2, 49% (22 out of 45) of the respondents feel completely comfortable (6 out of 45) to moderately comfortable (16 out of 45) when they have difficulty understanding students' speech and writing, whereas 51% (23 out of 45) feel slightly uncomfortable (17 out of 45) to very uncomfortable (6 out of 45). This response to these two questions could depend on factors such as the respondent's attitude and experience in dealing with students who

experience barriers to learning. According to Savolainen *et al.* (2012) the attitude of an educator has an influence on his/her level of self-efficacy. The more educators believe that they are able to support students with barriers to learning, the more positive their attitudes are. More experience in dealing with barriers to learning will in all likelihood lead to higher levels of comfort in interacting with students who experience barriers to learning. A significant number of respondents (42%) who participated in this study only have between one and five years teaching experience (cf.4.2.2.5). According to Leyser *et al.* (2011) training in the area of students with barriers to learning, be it a lengthy course or a short workshop, compared with no or minimal training, significantly promotes lecturers' feelings of self-efficacy.

Question item 3 suggests that the majority of respondents find it easy to deal with concerns regarding the subject matter that they teach since 87% (39 out of 45) of the respondents are completely comfortable (25 out of 45) to moderately comfortable (14 out of 45) in doing so. This might be due to the fact that most lecturers feel that they are well trained in their specific subject fields.

4.2.3.2.3 Construct 7: Provision of reasonable accommodations

The figure below indicates lecturers' responses to question 8 regarding the accommodations they are willing to provide for students who experience barriers to learning. The question started with "I am willing to..." followed by 11 possible accommodations. Respondents had to indicate the extent to which they agree with each of the 11 statements.

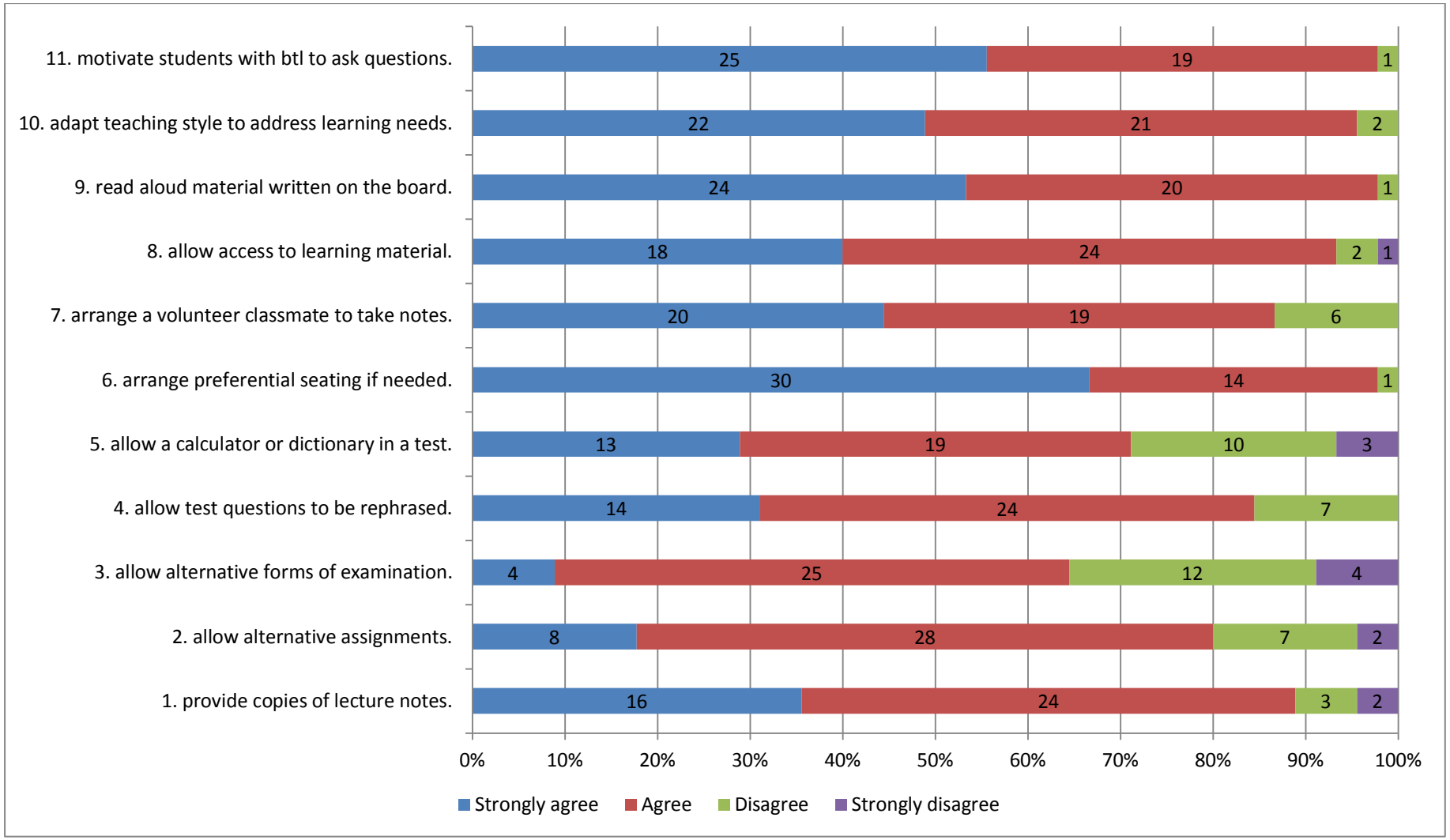

Figure 4.6: Provision of reasonable accommodations

In this question lecturers had to indicate the extent to which they agree with statements related to the provision of reasonable accommodations. A reasonable accommodation refers to any action from the lecturer that helps to alleviate a substantial disadvantage in a student resulting from an intrinsic or extrinsic barrier to learning (Chataika *et al.,* 2012:394). The purpose of this question was to get an indication of the willingness of lecturers to perform certain actions to support students. As expected, the majority of the respondents strongly agree and agree with the question items, indicating a willingness to accommodate students with barriers to learning by performing certain actions from their side. However, when looking at question item 2 under the construct "Personal beliefs regarding students with barriers to learning", 20 out of 45 respondents (44%) strongly agree (9%) and agree (35%) that educational accommodations compromise the curriculum (cf.4.2.3.2.1). It could indicate that lecturers are willing to make accommodations to students with barriers to learning, but are hesitant to do it in practice, in fear that it may compromise the curriculum, which confirms the earlier finding in paragraph 4.2.3.2.1.

A total of 36 out of 45 (16 strongly agree and 24 agree) of respondents are willing to provide copies of lecture notes; 36 (8 strongly agree and 28 agree) will allow alternative assignments and 30 out of 45 respondents will allow alternative forms of examination (4 strongly agree and 25 agree). It is noticeable that 12 of the 45 respondents (27%) disagree with allowing alternative forms of examination (item 3). Providing an alternative form of examination is a necessary accommodation for a student who has dyslexia or a reading and writing problem (cf. 2.7.1.3). How this accommodation is applied would depend on the assessment policy for learning disabled students at the institution, provided that such a policy exists. At the institution which is the focus of this study, there is a policy for students with disabilities, but it does not mention specific disabilities like dyslexia or the process of applying for alternative examination arrangements. According to Mortimore and Crozier (2006), additional time for examinations and the provision of a separate venue for examinations are common forms of support for learning disabled students at universities in the United Kingdom. A total of 38 out of 45 (14 strongly agree and 24 agree) will allow test questions to be rephrased and 32 out of 45 (13 strongly agree and 19 agree) will allow students to use a calculator or dictionary during a test. Thirteen of the 45 (29%) respondents would not allow this accommodation. At the institution of focus, there are quite a number of foreign students who experience a major language barrier as they did not have English as a subject during their school years and

thus have a very poor English proficiency. For these students, using a dictionary might be the only way in which they can interpret and answer a question correctly. A total of 44 out of 45 respondents (30 strongly agree and 14 agree) indicated that they would arrange preferential seating for a student who needs it, and 39 out of 45 (20 strongly agree and 19 agree) are willing to arrange a volunteer classmate to take notes for a student that has difficulty taking notes in class. A total of 42 out of 45 respondents (18 strongly agree and 24 agree) will allow students to access the learning material used in class, which may be notes or PowerPoint slides. All the respondents, with the exception of one, indicated that they are willing to read aloud material written on the board, which may be a natural action that occurs during the lecturing process. A total of 22 out of 45 respondents (49%) strongly agree and 21 out of 45 respondents (47%) agree to adapting their teaching style to address the learning needs of students (item 10), which is in total (96%) more than the initial number of respondents (69%) that indicated that they are willing to change curricula to meet the needs of students in question item 12 in construct 1 (cf. 4.2.3.1.1).This is an indication that although lecturers might be hesitant to provide accommodations to students who experience barriers to learning, the majority do have a positive attitude and are willing to make accommodations for students who are in need of support. A total of 44 out of 45 respondents indicated that they will motivate students who experience barriers to learning to ask questions.

4.2.3.3 Theme 3: Perception of what is needed to provide support

4.2.3.3.1 Construct 6: Perceived institutional support

The following figure indicates lecturers' responses to the question regarding their perception of institutional support.

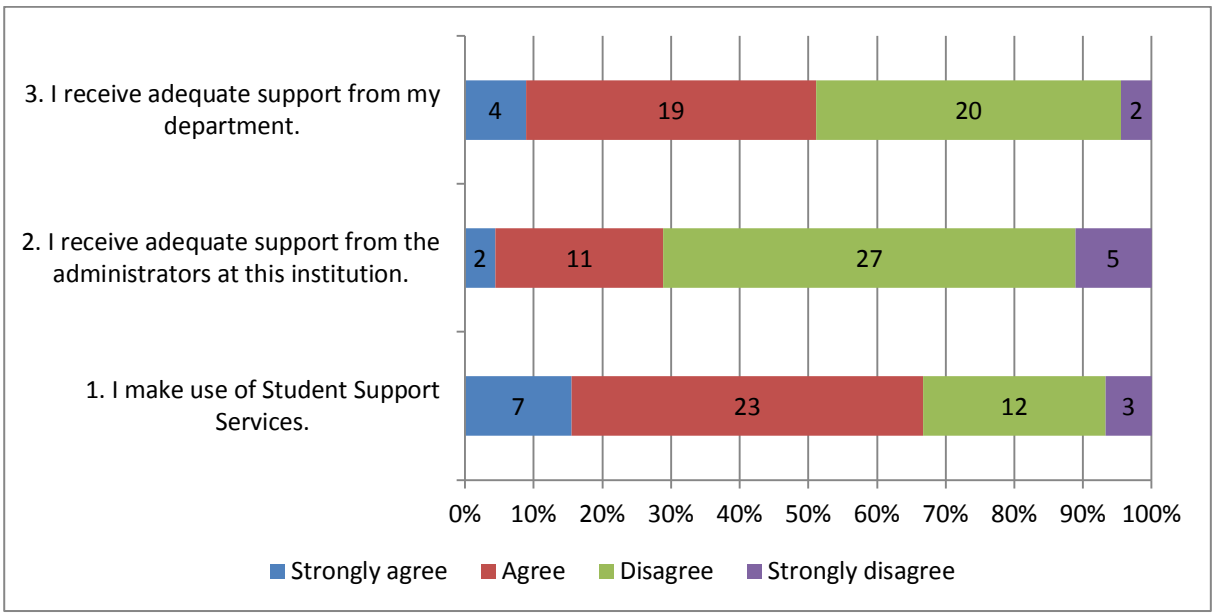

Figure 4.7: Perceived institutional support

Support on institutional level is paramount in creating an inclusive higher education environment (cf. 2.8.2). In this question, the respondents had to indicate the extent to which they agree with statements relating to support provided to them by the institution. It is interesting to note that a number of respondents disagree and strongly disagree with the statement related to institutional support. A total of 15 out of 45 respondents (33%) do not make use of Student Support Services, which is the only centralised support unit that is available on campus. A total of 27 out of 45 respondents (60%) disagree and 5 out of 45 respondents (11%) strongly disagree that they receive adequate support from the administrators at the institution of focus, and 22 out of 45 (20 disagree and 2 strongly disagree) respondents, which is in total 49% of the respondents, feel that they do not receive adequate support from their departments to assist them in their efforts to support students experiencing barriers to learning. If one considers question item 2 and 3, it appears that a lack of support from the institution's side might be a barrier to lecturers to effectively provide support to students.

In the following section, the qualitative data will be used to further explain the themes which were identified during the quantitative data analysis.

4.3 QUALITATIVE DATA ANALYSIS

The results of the qualitative data analysis will be discussed by documenting themes from the transcriptions of the interviews. The themes that were identified during the quantitative phase were used as basis for formulating the questions asked during the semi-structured interviews with the purpose of explaining the results of the quantitative data.

4.3.1. Theme 1: Lecturers' knowledge and awareness of barriers to learning

Table 4.9: Sub-themes for Theme 1

Theme 1	Sub-themes
Lecturers' knowledge and awareness of barriers to learning	Language problems
	Socio-Economic problems
	Lack of study skills and self-discipline
	Students' attitude and lack of commitment to their studies
	Psychological, social and emotional problems

Fifteen of the 45 respondents who completed the questionnaire participated in a semi-structured interview. During the interviews it became evident that lecturers do not fully understand the concept of inclusive education, as not all lecturers have a degree in education. When looking at the quantitative data in paragraph 4.2.3.1.1 under "Construct 1:Knowledge of inclusive education", it appears, however, as if lecturers do have sufficient knowledge of the characteristics of inclusive education and that they agree with the requirements for creating an inclusive learning environment. During the interviews the focus of the researcher was to determine whether lecturers are able to identify barriers to learning and how lecturers view support, and therefore she explored these issues on a deeper level.

When looking at "Construct 2: Knowledge of barriers to learning", the respondents indicated that they have a clear idea of what barriers to learning entail and the effect that these have on student success (cf. 4.2.3.1.2). During the interviews, the researcher aimed to clarify exactly what lecturers view as barriers to learning, which barriers occur

commonly among students and are easy to identify, and whether lecturers at the institution have a general awareness of barriers to learning.

The majority of the interviewees (11 out of 15) verbalised the sub-theme of language problems. Lecturers seem to be very aware of language problems experienced by students and the adverse effect that it has on students' academic performance. This correlates with the earlier findings in "Construct 3: Identification of barriers to learning", where respondents identified language problems as the most common barrier to learning (cf. 4.2.3.1.3).

"If their English proficiency is not up to standard they struggle a lot in our subject."

"From my experience, the biggest problem that I have identified is that they struggle with the language...especially if they do assignments and things. What you read sometimes doesn't make sense...I think it is because they start learning English very young and they don't even understand their own languages."

"*They must understand the English in which the questions are given before they can translate that into doing the calculation...but they can't translate the question itself into what they should do."*

"...we experience many problems with the students from the Congo, they complain 'Ma'm we cannot understand, we do not know the language, we cannot speak it.' It is really a big problem at our institution."

"One of the problems I have encountered is the standard of the language, English, is very low, some even can't speak English, shocking."

This correlates with literature on the subject of English language proficiency (cf. 2.7.2.4). Steyn and Kamper (2011) also found that a lack of English language skills significantly add to students' academic difficulties. It creates both a communication barrier between the student and the lecturer, as well as a study barrier, as students do not understand what they read. One of the interviewees added that in his opinion students are very lethargic when it comes to reading, and this aggravates their language problems.

"Students are so lethargic to read. I don't think that they are lazy or that they don't have energy to read, they can party the whole weekend, but the drive to read, the ability to read is lacking."

It appears that students' attitude towards reading poses a problem. This could indicate that students have a lack of insight regarding the importance of reading to improve their English language proficiency. Low academic literacy levels, especially among first year students, support this finding (cf. 2.7.2.4).

The second sub-theme that arose from the qualitative data analysis was the issue of socio-economic problems and the effect that it has on students. A significant number of respondents who completed the questionnaire (38 out of 45) also identified socio-economic problems to be a barrier to learning (cf. 4.2.3.1.3).

"some students' living situations are really bad. They don't always have food to eat."

"students can't work if they are hungry because they can't concentrate."

"financial problems definitely affect students."

"students get loans for their studies. Money for food, a proper place to stay and books, now that is a problem."

"it seems like a lot of our students are struggling financially, and they don't have money for basic things like food."

"*They can't study, the places where they are staying are not conducive to studying, there is noise and there are a lot of people and they don't eat well."*

"to be honest, a lot of my students don't even have the extra money to buy files or print their assignments and they really, really struggle. I have actually given them money to buy stuff just to get the work done. It is not that they don't want to do it they really just don't have the money."

Poverty and poor socio-economic circumstances have a direct adverse effect on students' academic performance. A student that suffers from malnutrition or that does not have a proper study environment will struggle to cope with a busy timetable and demanding study load (cf. 2.7.2.1). As one of the interviewees mentioned, students might obtain funding for the course fees, but money for food, books, clothing and living expenses is scarce. This adds to students' stress levels and has a negative influence on their ability to focus on their studies (Machika & Johnson, 2014).

The interviewees also identified a lack of study skills as a barrier to learning among students. Students do not seem to have the necessary study skills to handle the workload which differs vastly from what they were used to in secondary school; in many cases, it points to a lack of self-discipline on the students' part (cf. 2.7.1.3). This can be seen as a learning difficulty, which 42 out of 45 respondents who completed the questionnaire identified as a barrier to learning (cf. 4.2.3.1.3).

"Especially in the first year, it seems like my way of teaching is totally contradictory to the way they experience teaching in schools. Students are used to being spoon fed, and they expect the same treatment at university."

"They can't cope with the volume of work. They want to know one specific part of the work and leave out the rest. They don't understand that you need to know a little bit of everything at least. They expect the lecturer to tell them exactly what to study for a test."

"...some of my students really have difficulty studying; they come to me and ask me how to make summaries."

"I have had students in my classes that have absolutely no idea how to do a very basic assignment."

"Students do not know how to study. I sometimes find that they recognise a familiar word in a test question and then write everything they know about that particular concept, but in the end they do not actually answer the question. It is as if students are memorising the work, without really understanding what they are studying."

"...we expect students to do their assignments and learn on their own. They struggle with that. They need somebody to tell them, 'you know you have to study for tomorrow's test', 'remember this assignment needs to be done', constantly reminding them. It is as if they still have the school mentality."

"They study through the night and then the next morning they expect to do well in a test. They don't have study skills; they don't know how to cope on their own."

A fourth theme which became evident during the interviews is that students do not always have an attitude of learning that is conducive to their own success. Several of the interviewees (7 out of 15) complained that they find that their students show a lack of commitment towards their studies, and that their efforts to support their students are counterproductive;

"*Students want to get 50%. Students have even told me that if I explain something well, then they don't have to do homework because they know they can still pass, so the more I put in, the less they put in, which is a terrible situation... Any intervention that I try is counterproductive, because the more I do, the less they do."*

"We don't have a culture of learning at this institution. Some of them, I think, are just here to say that they went to university, because they are the first people in their family to study after matric."

"...I find that students are not used to working hard. They come here and they want to have a good time, and play around and when we get to the last week when we release the year marks, all of a sudden, they realise that they are going to fail."

"*They want the lecturer to give everything to them."*

"I would say students' attitude is the biggest barrier that they face. Some students just don't care, they don't attend class, they don't do homework. They pitch up for a test, and then they can't understand why they fail?"

Research has found that there is a strong relationship between students' motivation to learn and their academic success (Afzal *et al.*, 2010; Petersen *et al.,* 2009). During a study at the Mangosutho University of Technology in Kwa-Zulu Natal, Wells (2011) found that intrinsic motivation was the most important factor contributing to students' success. Students who are intrinsically motivated display characteristics of being diligent, hardworking and goal driven. On the other hand a lack of intrinsic motivation leads to students being absent from classes and lethargic towards their studies. From the responses of the interviewees it can be seen that the latter is true for some students at the institution of focus. Petersen *et al.* (2009) also found a positive association between intrinsic motivation, adjustment to university and academic performance. Students who seek help with difficulties that they experience are more motivated, better adjusted to university life and achieve a higher level of academic performance.

Lastly, several of the interviewees (9 out of 15) mentioned that they were aware of psychological, social and emotional problems that students experience, and that these have a definite effect on their students' ability to concentrate in class, perform assessments and reach their academic goals (cf. 2.7.1.5; 2.7.2.2). It was also identified during the quantitative data analysis to be one of the major barriers to learning experienced by students (cf. 4.2.3.1.3). Lecturers also seem to be very aware of the impact that the transition from high school to university has on students and that first year students especially struggle the most.

"They are far away from their parents, a lot of them, and they struggle emotionally and I have come across a few who have confided in me, telling me that they are suffering from depression."

"*They come here and it's the first time away from home and they fall into this big place, and they completely lose themselves."*

"I believe that for the majority of students, the first time being away from home is really challenging and although they might like the independence, they don't know how to deal with it."

"...I think it is very difficult for them to cope with all the demands placed on them in the tertiary environment that they haven't been exposed to previously, especially seeing that they arrive here already with a disadvantage."

Lecturers seem to be aware of the difficulties that first year students experience, and their concern about these is not unfounded. According to Wilson-Strydom (2010) the issue of under-preparedness of first year students to enter university studies is not a new or unique phenomenon, but over the past few years it has become a salient issue as higher education institutions are becoming increasingly aware of the challenges that first year students face and that these students need support. Wilson-Strydom (2010) found that first year students are under-prepared in both cognitive skills (such as reading and writing) as well as content knowledge, which can to a great extent be blamed on the South African schooling system. One of the interviewees agrees with this in the following comment:

"I think the major problem that our students have is their poor schooling. The standard of school education is low."

At university students are also confronted with other issues such as relationship problems; peer pressure, stress and substance use which could lead to risk-taking behaviour (cf. 2.7.2.2). A few of the interviewees (4 out of 15) verbalised some of the social and emotional problems which they could identify in students:

"Some students have problems at home and then they stay away from class for weeks. When they come back, they are so far behind and it almost impossible to catch up."

"I have had a couple of students this year coming into class smelling of alcohol or even dagga. To me, that is a big problem, how do you teach someone who is under the influence?"

"I have had several students, girls, in my classes that were pregnant. They go home to have the baby, and eventually when they return they missed half of the semester and it is impossible to re-teach everything to that student."

"I have had a student coming to me saying that his father passed away and now he has to work to support his mother and brothers and they live in another province. I feel sorry for him, but what can I do?"

To summarise, it appears that the majority of the interviewees have surface knowledge of barriers to learning, which is understandable as most of them are trained in their subject fields and do not necessarily have training in identifying and dealing with barriers to learning. From their experience in dealing with students, the majority of the interviewees seem to have ample awareness of the barriers to learning that students experience, and are able to identify the major issues that have an impact on students' success (cf.4.2.3.1.3). However, it appears that extrinsic barriers to learning (cf. 2.7.1) seem to be easier identifiable for the respondents than intrinsic barriers to learning (cf. 2.7.2); this explains the findings of the quantitative data analysis where the most common barriers to learning which were identified are extrinsic in nature (cf. 4.2.3.1.3).

4.3.2 Theme 2: Perception of the lecturer's role in providing support and own efficacy in providing support

Table 4.10: Sub-themes for Theme 2

Theme 2	Sub-themes
Lecturers' perceptions of their role in providing support and own efficacy in providing support	Lack of training in dealing with barriers to learning
	Referring students to Student Support Services

When asked how lecturers view their role in providing support to these students in which they could sometimes identify the barriers to learning mentioned in paragraph 4.3.1, the majority of the interviewees (10 out of 15) were inclined to answer in the same manner. Although they were willing to support students, they felt inadequate to provide the type of support they felt that students needed as they were not specifically trained in that regard.

"I think the only role that a lecturer basically can play is to identify the problems if he or she can, but as I said, it is difficult to identify, because students are not open, and I am

not trained to pick up many of the problems or to help students with these problems that they experience."

"Lecturers are trained in a specific subject discipline. Not all lecturers at this institution have an education degree and are thus not trained to deal with these aspects."

"Most lecturers would benefit from further training in how to deal with barriers."

"Lecturers are basically trained to deal with academic matters only. The focus is mainly on subject content and students' personal differences are not considered."

"I didn't support students on that level because I did not have the knowledge or the expertise to help them with the specific problem they experienced."

When the interviewees were asked about how they see their role in providing support to students, the majority (12 out of 15) responded by saying that they would rather refer students to Student Support Services to assist them, although some (5 out of 15) mentioned that there are certain measures that a lecturer can take to support students in class.

"If I can help a student during the learning process, I will, but for more specific problems I will rather refer them to Student Support Services."

"...if it is psychological, then I would refer them to the department that deals with that."

"I think what a lecturer can do to support students is basically to go over what has been previously taught in class, but we can't teach them to read, to do math, there is no time for that."

"During my lessons I would hint on social issues that have an impact on the lives of students and I will give advice, sort of."

"...I don't know if it counts, but I have helped students by listening to them and showing empathy to them, and referring them to the student counselling department."

"It depends on the problem. Where students have physical disabilities like eyesight or hearing problems, one could supply notes for them, but when it comes to problems outside the control of the lecturer, we are very disadvantaged in dealing with that."

"I see my role as a lecturer to direct them in the right direction, you know, sending them to student counselling if there's a problem."

"I assist students in a way that I will present extra classes if I see they struggle with a certain module, or I will make provision for extra lecturing time or consultation on a one-to-one basis, so to a certain extent I have a responsibility towards a student to assist as far as possible, within my limits. I am not an expert in psychology and things like that, so I will direct them to the student counselling department."

It can be concluded that lecturers view their abilities to provide support to students as limited owing to a lack of training and experience in dealing with barriers to learning, time constraints and an attitude that it is the responsibility of Student Support Services to deal with these students who experience barriers to learning. When looking at the situation within an ecosystemic perspective (cf. 2.6.2), it creates a problem to shift the responsibility of providing support to students to one department (Student Support Services) only. The proximal interaction between the student, lecturer and Student Support Services is vital in providing support on all levels that the student needs. Effective support should be a collaborative team effort where all parties involved take ownership in helping the student overcome his/her barrier to learning (cf. 2.8.1).

The quantitative findings which reside under this theme (cf. 4.2.3.2) namely "Construct 4: Personal beliefs regarding students with barriers to learning"; "Construct 5: Level of comfort with students experiencing barriers to learning" and "Construct 7: Provision of reasonable accommodations" were not fully explained during the qualitative phase of the study as the interviews were semi-structured and it was the intention of the researcher not to lead interviewees to answer in a particular manner, but to let the interviewees freely give their opinions and talk about their experiences. An issue which became evident though, and can be seen as supportive of earlier quantitative findings is the issue of self-efficacy (cf. 4.2.3.2.2). Lecturers, although willing to provide support, do not always feel confident in their efforts to support students and therefore strongly rely on Student Support Services to help students who experience barriers to learning.

4.3.3 Theme 3: Perception of what is needed to provide support

Table 4.11: Sub-themes for Theme 3

Theme 3	Sub-themes
Lecturers' perceptions of what is needed to provide support	Time
	Specialised support services
	Training
	Screening and information about students

The third theme which arose from the quantitative and qualitative data analysis was the issue of lecturers' perception that they do not have all the necessary resources to effectively support students. These resources include things such as time to consult with students, specialised support services where students can be referred to, training on how to deal with barriers to learning, and more information about students. If this lack of resources can be addressed, it could mean that more students with barriers to learning may receive the support that they are entitled to and that the institution could move forward to becoming an inclusive learning environment. Earlier findings during the quantitative data analysis of "Construct 6: Perceived institutional support" revealed that a significant number of the respondents (32 out of 45) feel that they do not receive adequate support from the institution's side to assist them in their efforts to support students who experience barriers to learning (cf. 4.2.3.3.1).

During the interviews, several of the interviewees (8 out of 15) mentioned that because of their workload and large numbers of students that they teach, time to support students is limited.

"Time is a big, big obstacle. Our timetables are not necessarily that full, but we have a big administrative load as well, and time to work one-on-one with a student means that you will have to do it sometime out of work hours, or you have to do it within work hours and then do your own work at home. So time is a big problem, and the pace of teaching is also quite fast, so I think we do not have the necessary time or facilities to help such students."

"...indicative of the workload that we have, it is impossible to assist students on that level."

"...because of time limitations, I can only identify students, but assisting them in a dedicated manner is beyond my time scope."

"I always tell my students, you can ask as many questions as you like, provided that I can finish the lesson in time, because I have a curriculum to finish."

"I can't give individual attention to 158 students. Time is a commodity which I don't have."

The majority of the interviewees (10 out of 15) mentioned that they believe that Student Support Services are under staffed and not able to cope with the number of students that need support. There is a dire need for specialised support services on campus to address specific problems.

"I would like to have a specific structure in place to help us accommodate these students, especially the foreign students that are not at all proficient in English."

"I think our Student Support Services are not well enough staffed to deal with all the problems that exist."

"...if we really have to implement inclusive education, then we will need to have specialised support structures to assist the lecturers to do that, because currently the services that are available are struggling to cope with the workload."

"I think we need a much bigger student support service; because it is not good to send the students there and then there is nobody to assist them. We also need to make lectures aware about the problems that students have and that they should be referred for help."

One of the interviewees mentioned that there should be collaboration between lecturers and Student Support Services:

"I think there should be additional resources on campus, and there should be more interaction, communication, and information sharing between lecturers and those support departments, so that we know where to refer these students to."

The process of transdisciplinary collaboration involves different professionals working together with the student to achieve mutual goals (cf. 2.8.1). It is also important that support services staff reach out to academics and not wait until a problem arises for academic staff to approach support services (Zhang *et al.,* 2010). This phenomenon of being inclined to work in isolation is supported by the research of Healy *et al.* (2011:14) who found that there is limited collaboration between support services and staff in South African Higher Education Institutions (cf. 1.1).

During the interviews, it became evident that lecturers are unsure of how the process of referring a student to Student Support Services works, and several of the interviewees mentioned that they either did not receive feedback or that it took a long time to receive feedback after referring students. A lack of policy regarding the issue of support was also mentioned.

"I honestly can't say whether Student Support Services actually help students. I have sent students there before but I never get feedback, unless the student himself comes and tells me that he's been helped."

"I did receive feedback, but too late, by that time the semester was almost over and I didn't really have contact with the student anymore."

"I feel like there is no guideline, no policy that guides us as to how support should be given. Each lecturer has a different personality and way of working with students. It would be nice to know 'okay, this is the situation, these are the steps that I need to follow', so that everybody on campus follows the same procedure."

Literature supports these findings, as inadequate support services and a lack of coherent policy regarding the implementation of inclusive education seems to be a problem in many higher education institutions (cf. 2.5; 2.7.2.5).

As mentioned in paragraph 4.3.2, the interviewees identified a lack of training regarding barriers to learning as an obstacle to providing effective support to students. When asked if they would be interested in receiving additional training, the majority of the interviewees (11 out of 15) responded by saying that they would welcome such training. Additional training in dealing with barriers to learning may lead to positive feelings regarding the inclusion of students who experience barriers to learning (Sharma *et al*., 2008).

"It would be a good idea if we could maybe receive workshops in order to be better equipped to help these students."

"I am not from an educational background, so perhaps it would be to my advantage if I had some training, specifically to deal with these problems."

"Yes, I think training would be very helpful, because we get students from all walks of life, and I think it will enable lecturers to know how to identify and where to refer these students to."

"I would like to get more training, the only training that I've done was ADHE, and then it was only one subject that deals with this...we should be taught to be able to identify these things and there should be a referral process."

Lastly, some of the interviewees (4 out of 15) mentioned that if they had some information about the students beforehand, it would assist them in supporting students:

"If there could be some kind of screening process, and we could get some information about our students' background, marks and so one before we actually start with classes. Or when they apply, let them write something like a short story of who they are, you can learn a lot from a person in what they write, it gives you insight into who you're dealing with."

"Perhaps more information about the students, statistics of where they come from, their schooling and so on. If we have more knowledge about the level of the students, then you can adjust your teaching according to that level."

Practically, it might be difficult to provide this type of information about students to lecturers, but it could prove to be helpful in the support process. Student profiling will be discussed as a recommendation in Chapter 5.

4.4 CONCLUSION

In this chapter the researcher aimed to answer the research questions which were formulated in Chapter 1. In analysing the data obtained through the questionnaires, the researcher was able to identify three themes which could be supported by the literature study in Chapter 2. Further explanation of the quantitative results was provided by excerpts from the transcriptions of the semi-structured interviews. During the mixing of the data, a clear picture of the opinions of lecturers regarding support to students who experience barriers to learning emerged. Lecturers at the institution of focus are aware of the fact that there are many students who experience barriers to learning, but are lacking in the area of student support. The institution will have to take certain measures if it is to move forward in becoming an inclusive Higher Education Institution.

Using the findings and discussion in this chapter, the following chapter will discuss the conclusions, recommendations and limitations to this study.

CHAPTER FIVE

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

There have always been students who perform better than others in any educational setting; likewise students who perform poorly. Poor performance can be ascribed to various factors which South African educationists in the past few years have referred to as barriers to learning. Donald *et al.* (2006:3) describe a barrier to learning as *"any factor that is a hindrance or obstacle to a student's ability to learn*." This is a wide concept, as a myriad of factors exist which could cause a student to perform poorly; factors which could either be intrinsic in nature such as a disability, or extrinsic in nature such as poor living conditions which impact on the health and ability of the student to study (cf. 1.1; 2.7).

With this research study, the researcher wanted to determine whether lecturers at a higher education institution, more specific a University of Technology, are aware of barriers to learning which impact students' ability to learn and perform well academically. It was also essential for the researcher to establish how these lecturers view their role in providing support to such students, and if they feel that it is indeed their duty to provide support to these students.

In this chapter the research questions will be answered, and the conclusions, limitations and recommendations will also be discussed.

5.2 CONCLUSIONS

The main concern in this chapter is to provide conclusions drawn from the literature review (cf. Chapter 2) and to summarise recommendations made regarding the empirical study.

Research Question 1:

What do barriers to learning entail?

The literature review revealed that “barriers to learning” is an umbrella term for various factors which have an impact on a student’s ability to study and meet the demands that the tertiary environment makes on a student (cf. 1.1, 2.5, 2.7). Barriers to learning are either intrinsic, meaning that they are located within the student or extrinsic, meaning that it stems from factors which arise outside the student and are many times beyond the control of the student (cf. 2.7). Within the context of this study, intrinsic barriers to learning include physical, sensory, neurological or developmental impairment, chronic illness, psycho-social disturbance or differing intellectual ability (Walton *et al.*, 2009:107). Extrinsic barriers to learning include factors such as socio-economic circumstances, social and emotional problems, an inflexible curriculum, language barriers and inadequate support services.

Research Question 2:

Which barriers to learning occur most commonly on tertiary level?

Literature with regard to the higher education landscape revealed that, although there are students with a range of disabilities (such as physical, sensory and/or learning impairments) within the higher education system, the number of students with such intrinsic barriers to learning is limited compared to the number of students who are affected by extrinsic barriers to learning (cf. 2.7). During the research, the respondents who completed the questionnaire identified extrinsic barriers to be more prevalent at the institution which is the focus of this study (cf. 4.2.3.1.3; 4.3.1). During the quantitative phase, language barriers were identified as the most common barrier to learning, followed by learning difficulties, psychological problems, socio-economic problems and emotional problems. Psychological problems resort under intrinsic barriers (cf. 2.7.1.5), but could be the result of extrinsic factors. These barriers were again emphasized by participants in the qualitative phase adding that students’ study skills, self-discipline and a positive attitude to studying are also experienced as problematic.

Research Question 3:

Are lecturers at the university which is the focus of this study aware of barriers to learning experienced by students in their classrooms?

During the research, the researcher found that lecturers at the institution are indeed aware of barriers to learning among their students, and during the interviews it became evident that some lecturers are able to more or less describe these barriers. Lecturers with an education qualification in addition to an academic qualification seemed to be more skilled in identifying barriers to learning. However, experience in teaching students also appears to have a positive effect on being able to identify barriers to learning.

Research Question 4

What does supporting students that experience barriers to learning entail on higher education level?

Support can take many forms, depending on the type of barrier to learning. If one considers intrinsic barriers to learning such as physical, sensory, neurological and learning disabilities, support entails that the buildings should be accessible for wheelchairs, assistive technology should be readily available, and assessment accommodations should be allowed (cf. 2.5). In South Africa, many higher education institutions do not have adequate structures and policies in place yet, and the accommodation of students with disabilities remains an issue which has not yet been fully addressed by the education department at large or by the administrators of higher education institutions (Matshedisho, 2007; Chataika *et al*., 2012).

Higher education institutions strongly rely on their support services departments, which are often not well enough staffed to cope with all the students who are being referred by lecturers for student support. Thus, inadequate support services could also be considered as an extrinsic barrier to learning (cf. 2.7.2.5).

Student support, however, could start with the lecturer being “tuned in” to the needs of students, and adapting his/her teaching style and curriculum to accommodate students who experience barriers to learning. An inflexible curriculum, which is an extrinsic

barrier to learning (cf. 2.7.2.3) became evident as one of the major barriers to learning that lecturers are either not aware of, or refuse to acknowledge (cf. 4.2.3.1.1; 4.2.3.1.3).

The answer for student support lies in a collaborative relationship between the student, lecturer, support services and other professionals who may be involved (cf. 2.8.1). If higher education institutions are to become truly inclusive higher education environments, the support needs of students on all levels need to be addressed, and the responsibility of providing support should be shared among the different support providers.

Research Question 5

How do lecturers see their role in providing support to students who experience barriers to learning?

The quantitative research results revealed that a significant number of lecturers feel that educational accommodations can compromise the curriculum and that accommodations made for students who experience barriers to learning could give them an advantage over other students (cf. 4.2.3.2.1). Furthermore, it was found that not all lecturers who participated in the study feel completely comfortable in dealing with students who experience barriers to learning, and that their levels of self-efficacy in dealing with students who experience barriers to learning is influenced by the number of years teaching experience that they have (cf. 4.2.3.2.2).

During the qualitative phase of the research, in particular the semi-structured interviews, it became evident that lecturers view their role in providing support to students who experience barriers to learning mainly as a referring role (cf. 4.3.2). Lecturers feel that students who are in need of support need to be referred to a department where the staff are able to address the specific problem that the student experiences and can provide the support that the student needs. It appears that the main reason for this is that they feel inadequate to provide the type of support they know that students require, mainly owing to a lack of training in dealing with barriers to learning. Lecturers tend to view themselves as academics whose main responsibility is facilitating learning. They do not consider themselves as “psychologists or social workers” as one of the interviewees mentioned.

Research Question 6

What do lecturers at the university, which is the focus of this study, need in order to provide adequate support to students who experience barriers to learning?

The quantitative research results show that lecturers feel they do not receive adequate support from the institution to assist them in their efforts to provide support to students experiencing barriers to learning (cf. 4.2.3.3.1). During the interviews, lecturers complained that they do not have sufficient time to deal with students in need of extra help, and that, when they refer students to Student Support Services, the latter are often unable to assist the student owing to being under-staffed. Often, the lecturer does not receive feedback from Student Support Services to ascertain whether the student has indeed been helped (cf. 4.3.3). Uncertainty regarding the process of referring a student to Student Support Services, and a lack of policy regarding support, also manifested as areas which need to be addressed. The need for training on how to deal with barriers to learning also featured strongly. It would be to the advantage of everybody concerned if sufficient information about students were made available to lecturers when classes commence. To summarise: time, an adequately staffed Student Support Services department, training in the area of barriers to learning and a student self-profiling tool are the main needs that have been identified by lecturers at the institution of focus.

Considering the above information, the researcher is able to answer the central research question: **"What is the opinion of lecturers at a University of Technology regarding their roles in providing support to students who experience barriers to learning?"**

Lecturers view their abilities to support students as limited due to a lack of training and insufficient levels of self-efficacy in providing support to students. It is the opinion of lecturers that their duty is merely to refer students who experience barriers to learning to departments which are able to deal with these barriers. Lecturers do not necessarily see the process of support as a collaborative effort; therefore it can be concluded that this is an area which needs to be addressed if the University of Technology wants to progress towards becoming an inclusive higher education environment.

5.3 LIMITATIONS

The research was conducted with lecturers at one University of Technology and therefore the following limitations were identified by the researcher.

- Only 45 respondents completed the questionnaire; thus the low response rate of 22.5% means that the findings of the research cannot be generalised to the entire university or other Higher Education Institutions in the district, province or country.
- The researcher experienced significant difficulty in receiving back the questionnaires which had been distributed to the lecturers (cf. 3.2.8). If a similar study is done, the researcher recommends that a session be scheduled in each department where the lecturers meet, complete the questionnaires and immediately return them to the researcher.

5.4 RECOMMENDATIONS

The recommendations based on the results of the research include the following:

- Lecturers at the university of focus should undergo training in the form of workshops or short courses on barriers to learning, how to identify these barriers and the steps that should be taken towards supporting students who experience barriers to learning.

- The Student Support Services department at the university of focus should be expanded in order to accommodate all students who are referred by lecturers. More staff should be employed and professionals need to be available to support students who experience barriers to learning.

- A centre needs to be established which specifically deals with language problems. This centre should have professional language facilitators available to support students who find it difficult to understand and study through the medium of English, especially foreign students who have a very poor English proficiency.

- A policy for support needs to be drafted that outlines the steps in the support process. Lecturers need to know how the referral process works, as well as the follow-up process after the student has consulted with Student Support Services.

- Student Support Services and academic staff need to engage in a collaborative relationship to the benefit of students in need of support. There should be on-going communication, teamwork and feedback in all stages of the support process.

- A student profiling process needs to be developed. This could be in the form of a portfolio including an essay which is submitted along with the student's application to the institution, or an interview and online questionnaire which is completed by the student at the beginning of the academic year during the registration process. The purpose of this process would be to compile a profile of the student with information about the student's aptitude, school results, socio-economic background, personality type, strengths and weaknesses. Although it may take time for lecturers to read this information about the students that they teach, if this information is readily available it could help the lecturer to provide support to a student who experiences a barrier to learning.

- The teaching and assessment load of lecturers should to be reconsidered. Lecturers need more time available to consult with students and provide support in the subjects that they teach.

The researcher has the following recommendations for further research:

- To be able to confirm whether the results from this research study relate to a larger population of lecturers, the researcher recommends that a similar study be done at another University of Technology in the province, or nationwide at other HEIs.

- Further research is needed on inclusivity in higher education and how support systems can be improved to address barriers to learning experienced by students.

5.5 FINAL CONCLUSION

All students can learn. Is this merely a lofty ideal, or do we really believe that each and every student has the potential to learn and become more than they thought would be possible for them? If we believe that all students can learn, we have to acknowledge that all students also need support (EWP 6) (SA, 2001:6). What is the role of the lecturer in helping students to realise their potential and become competent professionals, critical thinkers and better citizens who make a positive contribution to their country and the world at large? Are lecturers only there to facilitate learning, or should they go the extra mile for their students? These questions inspired the researcher to undertake this research. Inclusive education is not merely an ideology, it is a reality. We cannot see ourselves only as academics, we have to recognise and become aware of the barriers which students are faced with, and take a hands-on approach in helping them to overcome these barriers to learning.

If we are prepared to change our opinions, we can change our vision of our day to day work, and perhaps more students will be able to succeed.

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ADDENDUM A

North- West University Ethical Clearance

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOMKAMPUS

Privaatsak X6001, Potchefstroom
Suid-Afrika, 2520

Tel: (018) 299-1111/2222
Web: http://www.nwu.ac.za

Navorsingsfokusarea Onderrigleerorganisasies
Tel: (018) 018 299 4780
Faks: (018) 018 293 5245
E-pos: monty.monteith@nwu.ac.za

20 Mei 2010

Me Marietjie Halgryn

ETIEKAANSOEKE

Die ondergenoemde aansoeke is deur die etiekkomitee geëvalueer en word goedgekeur. Volle magtiging word aan die projekte verleen. Die etieknommer kan dus gewysig word soos aangedui.

1.1 Projekhoof	**Prof S Blignaut**
Etieknommer:	NWU-00006-09-R2 **NWU-00006-09-A2**
Student:	Me L Postma
Titel:	Democratizing an online discussion forum at a Higher Education Institution: from rationalistic exclusion to the recognition of multiple presences
Kommentaar:	Veranderinge is aangebring soos vereis.
Besluit:	Magtiging.

1.2 Projekhoof:	***Dr M Nel***
Projekspan:	
Etieknommer:	NWU-00033-10-S2 **NWU-00033-10-A2**
Titel:	A Comparative Analysis of Teachers' Roles in Inclusive Education
Besluit:	Magtiging.

1.3 Projekhoof:	***Prof LW Meyer***
Student:	I Venter
Etieknommer:	NWU-00040-10-S2 **NWU-00040-10-A2**
Titel:	Strategies for the development of self-regulated learning skills of first-year university students
Besluit:	Magtiging Punt 2.3: Die volledige voorletters van die lede van die projekspan moet gegee word Punt 6.3: Daar word genoem dat alle respondente ouer as 21 is – dit is nie relevant nie, kan weggelaat word.

Dankie en vriendelike groete

JL de K Monteith
Voorsitter: Etiekkomitee Fakulteit Opvoedingswetenskappe

ADDENDUM B

Permission to conduct research at the University of Technology

VAAL UNIVERSITY OF TECHNOLOGY

RESEARCH & INNOVATION ETHICAL CLEARANCE CERTIFICATE

Applicant:	Charlene Haywood
Project:	The opinions of VUT lecturers regarding support to students who experience barriers to learning.
Institution:	Vaal University of Technology
Date Approved:	20130225-3
Ethical Clearance Number:	Yes
Approved: Yes/No	2013-02-25

Approved by: _____ Date: 26/2/2013

Dr BJ Johnson
Chairperson: Research & Innovation Ethics Committee

ADDENDUM C

Informed Consent Form

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
VAAL TRIANGLE CAMPUS

PO Box 1174, Vanderbijlpark
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Web: http://www.nwu.ac.za

Title: The opinion of lecturers at a University of Technology regarding their role in supporting students experiencing barriers to learning.

Dear participant

You are hereby cordially invited to participate in the following research study:

The opinion of lecturers at a University of Technology regarding their role in supporting students experiencing barriers to learning.

The study is conducted by C Haywood at the Vaal University of Technology for the submission of a dissertation in fulfilment for the requirements for the degree *Master of Education* at the North West University, Vanderbijlpark Campus.

Participation in this study will require you to complete a structured questionnaire in which basic questions related to your knowledge and experiences regarding barriers to learning and support to students are posed. On the questionnaire there will be an option for the participant to be available for an interview with the researcher. Participants for the interview will be randomly selected from that group. Participation is voluntary and you may withdraw your participation at any time.

Confidentiality: Each participant that is willing to engage in an interview with the researcher and therefore discloses his/her name and contact details on the questionnaire, will receive a participation number at the commencement of the research project that will serve as reference throughout the period of participation. This is to ensure anonymity and confidentiality. There will only be one list linking each participant to his/her participation number for the purpose of contacting participants for the interview.

Please be assured that the information obtained from the questionnaires and interviews will be held in safekeeping, for access to the project researcher and supervisor only.

No direct benefits will accrue and no compensation will be paid to participants for their participation in this study. The result of this research study will be reported to the North West University for examination.

Should you have any queries regarding this study, please contact the researcher,
C Haywood at 074 157 6551 or e-mail: charlenev@vut.ac.za or the supervisor of this project,
Dr Nel at 016 910 3095 (during office hours) or e-mail: mirna.nel@nwu.ac.za

Consent:

I _____ have read the above –mentioned and understand the nature of my participation in this research project and hereby agree to participate.

_____ _____

Signature Date

_____ _____

Researcher Date

ADDENDUM D

Questionnaire

QUESTIONNAIRE

The opinion of lecturers at a University of Technology regarding their role in supporting students experiencing barriers to learning.

Dear lecturer

I would appreciate it if you could kindly complete the following questionnaire as part of my research for my Masters Degree in Education.

To provide adequate training for lecturers on how to accommodate students who experience barriers to learning at our institution, we need to determine what the needs in the practice are, specifically regarding the support needs of students experiencing barriers to learning as well as the resources needed by lecturers to address these barriers. Therefore, it would be sincerely appreciated if you could complete the following questionnaire. Please note that you complete the questionnaire anonymously and therefore it will be handled with utmost confidentiality. Follow-up interviews are voluntary and participants will be randomly selected from those lecturers who are willing to engage in an interview.

Your co-operation is truly valued.

Charlene Haywood
Junior Lecturer: Department of Communication and Education
Tel: 016 950 6774
E-mail: charlenev@vut.ac.za

QUESTION 1: BIOGRAPHICAL INFORMATION

Please indicate your answer by drawing a cross (x) across the applicable answer.

1.1	Age	23 – 35 years	36 – 45 years	46 – 55 years	56 – 65 years	Older than 65 years
1.2	Gender	Male		Female		
1.3	Race	African	White	Indian	Coloured	
1.4	Highest Qualification	Diploma	B Degree/ B. Tech	Honours	Masters	Doctorate
1.5	Years tertiary teaching experience	1 – 5 years	6 – 10 years	11 – 15 years	16 – 20 years	More than 20 years
1.6	Faculty in which you are presently lecturing.	Human Sciences	Applied and Computer Science	Engineering and Technology	Management Sciences	

QUESTION 2: KNOWLEDGE OF INCLUSIVE EDUCATION

Please indicate the extent to which you agree with the following statements by means of an **X**.
Please note that there are no right or wrong answers.

	Inclusive education is about:	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
2.1	Admitting students with disabilities to universities.	**1**	**2**	**3**	**4**
2.2	Acknowledging that all students can learn, including students who experience barriers to learning.	**1**	**2**	**3**	**4**
2.3	Acknowledging that all students need support.	**1**	**2**	**3**	**4**
2.4	Enabling structures to meet the needs of all learners.	**1**	**2**	**3**	**4**
2.5	Enabling education systems to meet the needs of all learners.	**1**	**2**	**3**	**4**
2.6	Respecting differences in students, whether due to age, gender, ethnicity, language, class, disability, HIV or other infectious diseases.	**1**	**2**	**3**	**4**

2.7	Acknowledging that learning also occurs outside the tertiary institution e.g. at home and in the community.	**1**	**2**	**3**	**4**
2.8	Acknowledging that learning also occurs within formal and informal settings and structures e.g. in the classroom, tutorial and study groups.	**1**	**2**	**3**	**4**
2.9	Changing attitudes to meet the learning needs of all students.	**1**	**2**	**3**	**4**
2.10	Changing behaviour to meet the learning needs of all students.	**1**	**2**	**3**	**4**
2.11	Changing teaching methods to meet the learning needs of all students.	**1**	**2**	**3**	**4**
2.12	Changing curricula to meet the learning needs of students.	**1**	**2**	**3**	**4**
2.13	Maximising the participation of all students in the curriculum of educational institutions.	**1**	**2**	**3**	**4**
2.14	Uncovering barriers to learning.	**1**	**2**	**3**	**4**
2.15	Minimising barriers to learning.	**1**	**2**	**3**	**4**

QUESTION 3: KNOWLEDGE OF BARRIERS TO LEARNING

Please indicate the extent to which you agree with the following statements by means of an **X**.
Please note that there are no right or wrong answers.

		Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
3.1	Barriers to learning are factors that hinder teaching and learning.	**1**	**2**	**3**	**4**
3.2	There are students at UOT that experience barriers to learning.	**1**	**2**	**3**	**4**
3.3	Barriers to learning prevent students from achieving optimum academic success.	**1**	**2**	**3**	**4**
3.4	Barriers to learning may reside within the student and are thus intrinsic e.g. physical impairment, visual impairment, hearing impairment, learning impairment, health problems and psychological problems.	**1**	**2**	**3**	**4**

3.5	Barriers to learning could occur due to factors outside the student and are thus extrinsic, e.g. poverty and inadequate living circumstances, social and emotional problems, inflexible curriculum, language problems and inadequate provision of support services.	**1**	**2**	**3**	**4**

QUESTION 4: IDENTIFICATION OF BARRIERS TO LEARNING

Please indicate if you have identified any students that experience the following barriers to learning during your time teaching at this institution.
Mark the appropriate barrier or barriers with an **X.**

4.1	Physical/Mobility impairment	
4.2	Visual impairment	
4.3	Hearing impairment	
4.4	Learning impairment e.g. Attention Deficit Hyperactivity Disorder, Attention Deficit Disorder, Dyslexia	
4.5	Learning difficulties e.g. reading, spelling and writing problems.	
4.6	Health problems and chronic illness	
4.7	Psychological problems e.g. - anxiety - difficulty handling the transition from school to university - eating disorders - substance abuse - depression - lack of study skills - lack of coping skills	
4.8	Socio – economic problems e.g. - poverty - inadequate and unsafe housing	

	- poor nutrition - lack of access to basic services such as transport and medical services	
4.9	Social problems e.g. - substance abuse - family problems - unwanted/unplanned pregnancy	
4.10	Emotional problems - depression - relationship problems - stress	
4.11	Inflexibility in the curriculum to accommodate the learning needs of students	
4.12	Language problems e.g. students that struggle to learn through English as medium of instruction.	
4.13	Inadequate support services offered by the institution to accommodate students with intrinsic and extrinsic barriers to learning.	
4.14	Other (Please mention them)	

QUESTION 5: PERSONAL BELIEFS REGARDING STUDENTS WITH BARRIERS TO LEARNING

Definition of accommodation:
Any action from the lecturer that helps to alleviate a substantial disadvantage in a student resulting from an intrinsic or extrinsic barrier to learning.

Please indicate the extent to which you agree with the following statements by means of an **X**.

		Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
5.1	Having students who experience barriers to learning in the classroom takes away from the quality of education other students receive.	**1**	**2**	**3**	**4**
5.2	Making educational accommodations (e.g. allowing a student with a learning disability extra time to write a test) can compromise the standard of the curriculum.	**1**	**2**	**3**	**4**
5.3	Providing additional support services for students who experience barriers to learning inhibits the development of self reliance and independence.	**1**	**2**	**3**	**4**
5.4	Providing accommodation to a student with a barrier to learning gives the student an advantage over other students in the class.	**1**	**2**	**3**	**4**
5.5	It is difficult to provide students the accommodation of additional time to write tests and complete assignments.	**1**	**2**	**3**	**4**

QUESTION 6: LEVEL OF COMFORT WITH STUDENTS WHO EXPERIENCE BARRIERS TO LEARNING

Please indicate the extent to which you agree with the following statements by means of an **X**.

		Completely comfortable	**Moderately comfortable**	**Slightly uncomfortable**	**Very uncomfortable**
6.1	When I find that there is a student in my class who experiences a barrier to learning I feel…	**1**	**2**	**3**	**4**
6.2	When I have difficulty understanding what a student is saying or writing, I feel…	**1**	**2**	**3**	**4**

6.3	When talking to students about their concerns about the course/subject, I feel…	**1**	**2**	**3**	**4**

QUESTION 7: PERCEIVED INSTITUTIONAL SUPPORT

Please indicate the extent to which you agree with the following statements by means of an **X**.

		Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
7.1	I make use of Student Support Services in working with students who have barriers to learning.	**1**	**2**	**3**	**4**
7.2	I receive adequate support from the administrators of the institution in supporting students who have barriers to learning.	**1**	**2**	**3**	**4**
7.3	I receive adequate support from my department in supporting students who have barriers to learning.	**1**	**2**	**3**	**4**

QUESTION 8: PROVISION OF REASONABLE ACCOMMODATIONS

Definition of accommodation:
Any action from the lecturer that helps to alleviate a substantial disadvantage in a student resulting from an intrinsic or extrinsic barrier to learning.

Please indicate the extent to which you agree with the following statements by means of a **X**.

		Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
8.1	I am willing to provide copies of my lecture notes, overhead transparencies or PowerPoint slides to my students.	**1**	**2**	**3**	**4**
8.2	I am willing to allow students to complete alternative assignments e.g. a written paper vs.an oral presentation.	**1**	**2**	**3**	**4**
8.3	I am willing to allow students to take an alternative form of examination.	**1**	**2**	**3**	**4**

8.4	I am willing to allow test questions to be rephrased if they are not clear to the student.	**1**	**2**	**3**	**4**
8.5	I am willing to allow students to use a basic calculator or dictionary during a test.	**1**	**2**	**3**	**4**
8.6	I am willing to arrange for preferential seating if needed e.g. students with vision problems.	**1**	**2**	**3**	**4**
8.7	I am willing to arrange for a volunteer classmate to take notes.	**1**	**2**	**3**	**4**
8.8	I am willing to allow hands-on access to learning materials.	**1**	**2**	**3**	**4**
8.9	I am willing to read aloud learning material written on the board or on the slides.	**1**	**2**	**3**	**4**
8.10	I am willing to adapt my teaching style to address the learning needs of my students.	**1**	**2**	**3**	**4**
8.11	I am willing to adapt my teaching style to motivate students who experience barriers to learning to ask questions about the course content.	**1**	**2**	**3**	**4**

Are you willing to engage in a follow up interview on the topic with the researcher?

……

If yes, please provide the following contact information:

Title, Name and Surname: ……..
Faculty: ……..
Department: ……..
Office number: ……..
E-mail address**:** ……..

THANK YOU VERY MUCH FOR YOUR TIME AND EFFORT IN COMPLETING THIS QUESTIONNAIRE.

Charlene Haywood

ADDENDUM E

Interview Schedule

Data Collection Phase 2: Individual semi-structured interview with lecturers

Interview Questions

1. In which faculty are you presently teaching?
2. Which subject do you teach?
3. How many years tertiary teaching experience do you have?
4. How long have you been teaching at this institution?
5. What is your definition of a barrier to learning?
6. In your experience teaching at this UOT, have you encountered students with barriers/obstacles that prevent them from learning and being successful in their studies?
7. Tell me more about the specific barriers that you encounter on a regular basis while working with students.
8. Do you think that it is part of a lecturer's "job" to provide support to such students?
9. What do you think can a lecturer do to support students with barriers to learning?
10. What have you done in the past to provide support to your students?
11. In terms of resources, what do you think is needed to support students with barriers to learning?
12. Have you ever worked with Student Support Services?
13. If you have, did it help?
14. Have you ever received training in identifying and dealing with barriers to learning?
15. If not, would you be interested to learn more about barriers to learning and how to accommodate students who experience these barriers?
16. Do you have any comments or suggestions?