# LOGISTICAL, TEACHING AND LEARNING CHALLENGES OF UNDERGRADUATE STUDENTS WITH VISUAL IMPAIRMENTS AT A SELECTED UNIVERSITY

by

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# DECLARATION

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# ABSTRACT

After the Salamanca World Conference on Special Needs Education on 10 June 1994, inclusive education became more prominent to redress inequalities and exclusions in society. In 2018, the Strategic Policy Framework on Disability for the Post -School Education and Training System was commissioned by the Minister of Higher Education and Training in South Africa to give attention to disability inclusion as an outflow of the 2013 and 2015 White Papers. Persons with disabilities are increasingly furthering their studies in the post-school sector. South African researchers explored challenges faced by students with disabilities when accessing higher education. While there is much research focused on the challenges faced by students with disabilities, studies which focus specifically on experiences of students with visual impairments at higher education institutions are limited. This study intended to gain an understanding of the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments in higher education using a selected university as a case study. Semi-structured one-on-one interviews were used to collect qualitative data from 15 registered undergraduate students at a selected university. Participants were selected using purposive sampling. The data was analysed using thematic analysis. The findings of the empirical investigation showed that undergraduate students with visual impairments experience logistical, teaching and learning challenges in higher education at different levels of the university. At micro level, signage visibility and PowerPoint fonts are considered to be logistical, teaching and learning challenges. At mezzo level, students with visual impairments experience support services to be challenging. At macro level, accessible transportation challenges were described as the major concern. Recommendations resulting from the study indicate that it is vital for students with visual impairments to disclose their disability when entering a higher education institution to ensure that specialised support is provided. It is recommended that the use of different social media platforms is maximised to raise awareness about the support services provided.

# OPSOMMING

Na die Salamanca-wêreldkonferensie oor onderwys met spesiale behoeftes op 10 Junie 1994, het inklusiewe onderwys meer prominent geword vir die regstelling van ongelykhede en uitsluitings in die samelewing. In 2018 het die Minister van Hoër Onderwys en Opleiding in Suid-Afrika die strategiese beleidsraamwerk vir gestremdhede vir die naskoolonderwys- en opleidingsstelsel opgestel om aandag te gee aan die insluiting van gestremdhede as 'n uitvloei van die Witskrifte van 2013 en 2015. Persone met gestremdhede studeer in toenemende mate in die naskoolse sektor. Suid-Afrikaanse navorsers het die uitdagings ondersoek wat studente met gestremdhede in die gesig staar wanneer hulle toegang tot hoër onderwys betree. Alhoewel daar baie navorsing is wat fokus op die uitdagings van studente met gestremdhede, is daar min studies wat spesifiek fokus op ervarings van studente met visuele gestremdhede in hoëronderwysinstellings. Daarom was dié studie bedoel om 'n begrip te kry van die logistieke, onderrig- en leeruitdagings wat voorgraadse studente met visuele gestremdhede in die hoër onderwys ervaar, met behulp van 'n geselekteerde universiteit as gevallestudie. Semi-gestruktureerde onderhoude van aangesig tot aangesig is gebruik om kwalitatiewe data van 15 geregistreerde voorgraadse studente van die geselekteerde universiteit in te samel. Deelnemers is gekies met behulp van doelgerigte steekproefneming. Die data is geanaliseer deur middel van tematiese ontleding. Die bevindings van die empiriese ondersoek toon dat voorgraadse studente met visuele gestremdhede logistieke, onderrig- en leeruitdagings in die hoër onderwys op verskillende vlakke van die universiteit ervaar. Sigbaarheid en PowerPoint lettertipe word op mikrovlak beskou as logistieke, onderrig- en leeruitdagings. Op mezzovlak ervaar studente met visuele gestremdhede uitdagings ten opsigte van ondersteuningsdienste. Op makrovlak is toeganklike vervoeruitdagings as die grootste bekommernis beskryf. Aanbevelings as gevolg van die studie dui aan dat dit noodsaaklik is dat studente met visuele gestremdhede hul gestremdheid verklaar wanneer hulle by 'n hoëronderwysinstelling inskakel om te verseker dat gespesialiseerde ondersteuning verleen word. Dit word aanbeveel om die gebruik van verskillende sosiale media-platforms te maksimeer om bewustheid oor ondersteuningsdienste te lewer.

# ACKNOWLEDGEMENTS

# LIST OF ABBREVIATIONS

BA          Bachelor of Arts

CET         Community Education and Training

DBE         Department of Basic Education

DESC        Departmental Ethical Screening Committee

DHET        Department of Higher Education and Training

HEDSA       Higher and Further Education Disability Services Association

HEMIS       Higher Education Management Information System

IASSW       International Association of School of Social Work

IFSW        International Federation on Social Workers

JAWS        Job Access with speech software (text to speech software)

NSFAS       National Student Financial Aid Scheme

REC         Research Ethics Committee

SACSSP      South African Council for Social Service Professions

TVET        Technical and Vocational Education and Training

UN          United Nations

UNESCO      United Nations Educational, Scientific and Cultural Organisation

WHO         World Health Organization

WPRPD       White Paper on the Rights of Persons with Disabilities

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# CHAPTER ONE

# INTRODUCTION OF THE STUDY

## 1.1 PRELIMINARY STUDY AND RATIONALE

More than a billion people are estimated to live with some form of disability, or about 15% of the world's population (World Health Organization World Report on Disability, 2011). That 15% of the world's population experience significant difficulties in functioning with a wide range of disabilities. These disabilities include physical, systemic, and sensory disabilities such as visual impairment, psychological, learning and intellectual disabilities. The White Paper on the Rights of Persons with Disabilities (WPRPD, 2015) defined disability as being 'imposed by society when a person with a physical, psychosocial, intellectual, neurological and/or sensory impairment is denied access to full participation in all aspects of life, and when society fails to uphold the rights and specific needs of individuals with impairment' (White Paper on the Rights of Persons with Disabilities, 2015:4).

According to the United Nations Convention on the Rights of Persons with Disabilities (2008), disability is an evolving concept and disability results from the interaction between persons with impairments and attitudinal and environmental barriers. 'It recognises persons with disabilities as those who have long-term physical, psychosocial, cognitive and/or sensory impairments which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others'. 'Sensory impairments include blindness, low vision, deafness, hard-of-hearing as well as deaf blindness'. For the purpose of the study, the researcher will focus on sensory disability as a visual impairment.

According to the Strategic Policy Framework on Disability for the Post-School Education and Training System (2018) Section 9(3) of Chapter 2 (The Bill of Rights) of the South African Constitution (1996) deals with equality, meaning that the state may not unfairly discriminate directly or indirectly against anyone in terms of race, gender, sex, disability, religion, and other characteristics. Therefore, the Department of Higher Education and Training asserts that the inclusion of disability equity in the Bill of Rights underscores its status as a human rights issue and that the violation of the rights of people with disabilities should be regarded as a human rights violation.

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The United Nations Convention on the Rights of Persons with Disabilities (2008) and the White Paper on the Rights of Persons with Disabilities (2015) adopted the human rights approach to disability. It acknowledges the protection and promotion of the human rights of persons with disabilities and indicates that the state must ensure and promote the full realisation of all human rights and fundamental freedoms of all persons with disabilities without discrimination based on that disability, and the protection of all persons against the violation of their human rights.

However, persons with disabilities in South Africa continue to face numerous challenges when accessing higher education institutions owing to their disability (Howell, 2006; Lourens 2015; Mutanga, 2017). While institutions in the post-school education and training system throughout South Africa have made progress in addressing the rights for reasonable accommodation of and services for persons with disabilities, much still needs to be done (Strategic Policy Framework on Disability for the Post-School Education and Training System, 2018).

According to Reichert (2007), contemporary social work claims to be a human rights profession that is interested in bringing about social justice. This is endorsed in the revised global definition of social work as a practice-based profession and academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people, with principles of social justice, human rights, collective responsibility, and respect for diversities as fundamental to social work (IFSW & IASSW 2014). Based on this definition, social workers are expected to promote social change, social development, social cohesion, empowerment, and the liberation of vulnerable groups. Moreover, social workers have an obligation to enhance social change and ultimately, to bring about social justice within communities. In addition, the global social work statement of ethical principles indicates that social workers promote social justice in relation to communities and on behalf of people to whom they render services (IASSW, 2018).

Furthermore, the American National Association of Social Workers (NASW) code of ethics, asserts that social workers should be involved in social action and should advocate for disadvantaged groups (NASW, 2018). Similarly, the South African Council for Social Service Professions (SACSSP) code of ethics maintains that social workers promote social justice and seek social change with and on behalf of vulnerable and oppressed persons, families, groups, and societies. (SACSSP, 2008).

Some international research about students with disabilities seems to focus more on problems regarding access to universities, challenges experienced to learning and assessment and lastly, negative attitudes of lecturers toward students with disabilities Riddell, Tinklin and Wilson (2005:157). According to Riddell, Tinklin and Wilson (2005:157), the future of British higher education inclusion policies for disabled students will inevitably be shaped by changes in the higher education system. Similarly, in South Africa, researchers such as Howell (2006), Lourens (2015), Mutanga (2017), and Lourens and Swartz (2020), focus on the challenges that students with disabilities face when accessing higher education, as well as in accessing the support needed to be a well-adjusted student who performs well academically. The global view of other countries internationally illustrates the experiences of disabled students in higher education in the tensions which have emerged as the UK higher education system transforms itself from an elite to a mass system. Furthermore, there is evidence that academics are finding it difficult to adapt to the challenge of educating a much more diverse group of students. But there is also evidence of innovative work in higher education. The disabled students' advisers, despite the structural problems they encounter, have acted as change agents, creatively using the funds available to provide disabled students with the support needed to survive in large and anonymous institutions.

Since the advent of a democratic government in 1994, South Africa has been building a new education and training system whose goal has been to meet the needs of a democratic society. Policy developments have been aimed at democratising the education system, overcoming unfair discrimination, expanding access to education and training opportunities, and improving the quality of education, training, and research. Many disabled students continue to experience discrimination in terms of access to post-school education and training opportunities. The system has inadequate facilities and staff to cater for the needs of disabled students (DHET, 2013). South Africa is a signatory to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 2007). The government thus has a responsibility to acknowledge and protect the rights of all people in South Africa, but more specifically of people with disabilities because they are a marginalised group.

According to Lyner-Cleophas (2020), the South African Constitution and the Higher Education Act 101 of 1997 note the importance of addressing inequalities and diversity in education and call for flexibility and redress in transforming our society. Discrimination against people based on class, race, gender, and disability is illegal. In 2018, the Department of Higher Education and Training released a strategic framework for disability

in the tertiary sector specifically to address disability inclusion as part of diversity (Strategic Policy Framework on Disability for the Post-School Education and Training System, 2018).

In 2016, it was estimated that 7.7% of South Africans lived with a disability (StatsSA Community Survey, 2016). The latest available census data indicate that 5.3% of disabled persons attained higher education compared to 22.3% of non-disabled individuals (StatsSA, 2013). When persons living with disabilities enter higher education they are taking up an opportunity to increase their knowledge, to develop their social skills, to obtain good qualifications and to expose themselves to debate and discussion.

According to Mkhize (2014), higher education institutions are becoming the main institution for social development. These institutions prepare students to participate in a world bound together by communication and economic and social relations. Education has become essential for individuals to cope with the demands of modern living but also for national economic survival, with the understanding that everyone develops well, and that the university supports that development. Therefore, higher education institutions have Student Affairs divisions that consist of student support units contributing to areas such as support to students with disabilities, career development, employability, and self-empowerment. The latter resonates with the mission of social work as a discipline where the objective is to develop the full potential of individuals, to enrich their lives and prevent dysfunction. Social work as a profession promotes social change, problem-solving in human relationships, empowerment, and the liberation of people to enhance their well-being (Du Toit, 2009).

## 1.2 PROBLEM STATEMENT

Kumar's (2011:44) identification of the research problem is the initial and most important step in the research process. It is like identifying a destination before undertaking a journey as it provides the basis for the study and determines all subsequent steps to be followed in the research study (Kumar, 2011:44-45). Lourens and Swartz (2020) report that South African students with disabilities face numerous challenges when accessing higher education institutions. In Article 24 the UNCRPD (2007) states that all nations shall ensure that persons with disabilities are able to access general tertiary education, vocational training, adult education, and lifelong learning without discrimination and on an equal basis with others. This means that state parties shall ensure that reasonable accommodation is provided for persons with disabilities. This global commitment to uphold the principles set

out by the UNCRPD is evident through the fact that 164 countries, including South Africa, signed this convention (Mutanga, 2017).

However, legislation has yet fully to infuse the embodied experiences of disabled students at tertiary campuses (Lourens & Swartz, 2016). According to Lourens and Swartz (2020) true inclusion requires not only access to universities, but in essence, it requires social restructuring and the provision of adequate support. The experience of students with disabilities in classrooms and residences as well in all domains of university life should be equal to that of their non-disabled peers. Their university experiences should leave them with the knowledge that they truly are part of an educational institution and that they are valued and celebrated citizens of their country (Beauchamp-Pryor, 2013; Lourens & Swartz, 2016). Howell and Lazarus (2003) explored the challenges faced by students with disabilities entering higher education institutions. They emphasise that barriers within higher education relate to attitudes towards disability, academic curricula, physical environments, teaching and learning support, and the allocation and distribution of resources. However, this study explored logistical, teaching and learning challenges of undergraduate students with visually impaired in higher education using Stellenbosch University as a case study.

## 1.3 RESEARCH QUESTION

The study aimed to answer the following research question:

- What are the logistical, teaching and learning challenges experienced by undergraduate students with a visual impairment?

## 1.4 AIMS AND OBJECTIVES

The aim of the study was to gain more insight of the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments in higher education using Stellenbosch University as a case study. The study had the following objectives:

- To describe the nature of visual impairment for undergraduate students within the context of the ecological perspective.
- To provide a contextual analysis of disability, focusing on undergraduate students with visual impairment with regard to existing policies in higher education training in a South African context.

- To empirically investigate logistical, teaching and learning challenges experienced by undergraduate students with visual impairments.
- To make recommendations to student support services on logistical, teaching and learning challenges experienced by undergraduate students with visual impairments with regard to existing policies in higher education training.

## 1.5 THEORETICAL FRAMEWORK

The ecological systems perspective, as a point of departure, provides the opportunity to investigate the relationship between the person-in-environment (Kondrat, 2013). De Vos, Strydom, Fouché & Delport 2011) have indicated that engaging in the literature study assists in enriching the researcher with an in-depth understanding of the identified research problem. Such an understanding may allow for, and/or contribute to the identification of the gaps associated with the study. The study utilised the ecological systems perspective as theoretical points of departure. The ecological systems perspective focuses on the micro, mezzo and macro levels (ecological systems perspective) and will be the core theoretical undergirding ethos of this study. For this study, the ecological systems perspective as a school of thought was utilised, as it will create the chance to see the logistical, teaching and learning challenges experienced by undergraduate students with visually impairments at a selected university in South Africa. The actualities of students' experiences of their day-to-day encounters of logistical, teaching and learning challenges in various levels in universities, are the focus of the study.

The main concepts of the ecological systems perspective, which include the micro system, the mezzo system, the exosystem, the macro system as well as the chronosystem. For the sake of the study, Bronfenbrenner's model has been chosen as the bio-ecological perspective provides a multi-faceted model of human development. It could serve as a tool to aid in understanding the complexity of the influences, interactions and relationship between the individual person and all the other systems that are interconnected to the individual (Bronfenbrenner, 2005).

## 1.6 CONCEPTS AND DEFINITIONS

### 1.6.1 DISABILITY

According to the Strategic Policy Framework on Disability for the Post-School Education and Training System (2018), Disability is defined as the loss or elimination of opportunities to

take part in the life of the community, equitably with others, encountered by persons having physical, sensory, psychological, developmental, learning neurological or other impairments, which may be permanent, temporary or episodic in nature, thereby causing activity limitations and participation restrictions within mainstream society. These barriers may be due to economic, physical/ structural, social, attitudinal, and cultural factors.

## 1.6.2 HIGHER EDUCATION

The Department of Higher Education and Training in South Africa is a department of the National Government. South Africa has 26 public higher education institutions and 123 private higher education institutions. There are also about 50 Technical and Vocational Education and Training (TVET) colleges and nine Community Education and Training (CET) colleges that are also state funded. There were about 279 private colleges that were registered with DHET in 2016/ 2017. Higher Education and Training, or tertiary education, includes education for undergraduate and postgraduate degrees, certificates and diplomas, up to the level of the doctoral degree, and refers to the education that normally takes place in universities and other higher education institutions (HEIs), both public and private, which offer qualifications on the Higher Education Qualifications Framework (HEQF) (DHET, 2018).

## 1.6.3 INCLUSION

Inclusion is seen to involve the 'identification and minimising of barriers to learning and participation and the maximising of resources to support learning participation' (Ainscow, Booth & Dyson, 2004). UNESCO views inclusion as 'a dynamic approach of responding positively to pupil diversity and of seeing individual differences not as problems, but as opportunities for enriching learning' (UNESCO, 2005:12). Inclusion can be described as a 'reconceptualization of values and beliefs that welcomes and celebrates diversity, and not only a set of practices' (Swart & Pettipher, 2011:8).

In the context of the study, inclusion refers to students with disabilities experiences of being supported in the teaching and learning context. This includes the classroom and examination contexts and does not include aspects that affect students, such as issues regarding ageism. Inclusion relates specifically to the academic learning and teaching environment and the systems that impact with reference to disabilities, which could include access to residences, funding and the physical environment (logistical matters).

## 1.6.4 REASONABLE ACCOMMODATION

According to the Strategic Policy Framework on Disability for the Post-School Education and Training System (2018b), reasonable accommodation refers to necessary and appropriate modification and adjustments, as well as assistive devices and technology. Persons with disabilities should not be excluded from a situation, where the enjoyment or exercise on an equal basis with others is available.

## 1.6.5 VISUAL IMPAIRMENT

According to the World Health Organization, visual impairment is defined as '... the best vision of less than and equal to 20/400 in the better eye...' (Congdon, Friedman & Lietman, 2003:2057–2060).

## 1.6.6 UNDERGRADUATE STUDENT

According to The American Heritage Dictionary of the English Language (2000:1) an undergraduate is a college or university student who has not yet received a bachelor's or similar degree.

## 1.7 RESEARCH METHODOLOGY

This section presents the methodology which was utilised during the study. This includes the research design, sampling method, data collection, data analysis and data verification.

## 1.7.1 RESEARCH APPROACH

According to Merriam (1998:5) qualitative research is an umbrella concept covering several forms of inquiry that helps the researcher to understand and explain the meaning of social phenomena. This should be done with as little disruption of the natural setting as possible. Merriam (1998:6) further states that qualitative researchers are interested in understanding the meanings or impressions people have constructed in order to make sense of their worlds. Qualitative research implies direct concern with experiences as it is lived and therefore based on the view that individuals interacting with their social world's reality Therefore, a qualitative research approach was used for the purpose of this study. Creswell (2007) defines a qualitative research approach as a positioned action that locates the researcher in the participants world. In addition, Erikson (2013:89) described qualitative research as a method of investigation and to describe in narrative reporting what particular

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people do in their everyday lives and what their actions mean to them. De Vos et al. (2011) proclaim that a qualitative approach is characterised as unstructured, since it enables flexibility in all aspects of the research process. Therefore, this approach was used to allow the researcher to explore phenomena in their natural setting while trying to understand things in terms of the meaning that people ascribe to them. (Creswell, 2007) Thus, a qualitative research approach was essential, as the study was concerned with narratives the voice of visually impaired students (De Vos et al., 2011).

## 1.7.2 RESEARCH DESIGN

According to Mouton (2005:55) research design is a blueprint of how the researcher intends to conduct the research. Since the aim of this research is to investigate the experiences of undergraduate students with visual impairments with regard to the logistical, teaching and learning challenges they experience in higher education, by using a case study of Stellenbosch University. Since the study was qualitative in nature, exploratory and descriptive research were utilised in the research design. According to De Vos et al. (2011:95), exploratory research is conducted to gain insight into a situation, phenomenon, community or individual. Social research serves many purposes, and it is possible to distinguish between exploratory studies, descriptive studies and explanatory studies (Babbie & Mouton, 2001; Terre Blanche, Durrheim & Painter, 2006). Babbie and Mouton (2001:79) state that any given research can have more than one of these purposes. In order to get an initial understanding of a phenomenon, and when a new interest or subject of research is examined, the approach is typically exploratory. The approach is open, flexible and inductive to obtain new insight, to ask new questions, and to develop hypotheses (Terre Blanche et al., 2006:44). In addition, Babbie and Mouton (2001:80) explain that, in general, exploratory studies are done for the following reasons: first, for better understanding; second, to test the possibility of more extensive research; third, for the development of methods to be used in later studies on the same topic; fourth, to clarify the central concepts and constructs of the research; fifth, to establish priorities for potential research; and last, to develop a new hypothesis about an active phenomenon. This study have included a descriptive research design. According to De Vos et al. (2011:96), descriptive research presents a picture of the specific details of a situation, social setting or relationship and focuses on 'how' and 'why' questions. The use of this design in collaboration with exploratory research will thus allow for the development of new knowledge with regard to the topic of research.

## 1.7.3 SAMPLING POPULATION

According to De Vos et al. (2011:223), a sample comprises elements or a subset of the population considered for actual inclusion in the study, or it can be viewed as a subset of measurements drawn from a population, in which the researcher is interested (Unrau, Gabor & Grinnell, 2007:279). Sampling is studied to understand the population from which it was drawn. The population of the study consisted of undergraduate visually impaired students at a higher institution in Stellenbosch. The sampling method which was used to recruit participants from the population involved non-probability sampling. De Vos et al. (2011:231) state that the method is used when the researcher does not know the odds of selecting a particular individual.

De Vos et al. (2011) argue that purposive sampling is based entirely on the judgement of the researcher. The researcher selects a sample from the population that is composed of elements that contain the most characteristics or typical attributes that will best serve the purpose of the study (De Vos et al., 2011). Purposive sampling is a technique that is based on the judgement of the researcher, in that the sample comprises elements that contain most of the characteristics of the population (De Vos et al., 2011). Furthermore, this form of sampling is chosen as it allowed participants to be selected based on characteristics, as defined by the researcher. The sampling method selected ensured that participants were able to provide the needed information for the successful completion of this study. De Vos et al. (2011:392) point out that the researcher should clearly identify and formulate pre-selected criteria for the selection of the respondents.

The criteria for inclusion in the sample for the study were as the follows:

Participants must be:

1. A registered undergraduate Stellenbosch University student and who has disclosed their disability.
2. A Student who has disclosed being a person living with visually impaired disability.
3. A student who uses Braille, JAWS software (speech recognition software) or enlarged font.

The sample consisted of 15 participants who were undergraduate students and had visual impairment. All recruited participants in the study were requested to participate in the study voluntarily. The recruitment process of the study unfolded as follows. First, the researcher obtained institutional permission from Stellenbosch University to conduct the study (See

Annexure A). Second, ethical clearance approval was obtained from the Research Ethics Committee for the Humanities at Stellenbosch University to initiate the study. Approval was granted (See attached Annexure B). Third, the researcher requested permission to establish communication with students with disabilities who use the Centre which renders support services to students with disabilities (See Annexure C). Potential participants were informed about the study via email. The researcher began the process of data collection by contacting the potential participants who gave consent to the Centre. During the contact, the researcher introduced herself to the potential participants and explained the purpose and procedures of the research study. The researcher then established their readiness to participate in the research study. Permission was obtained from willing participants to tape record the interview (Tutty, Rothery, & Grinnell, 1996:67). The participants were informed about the confidential nature of the tape recordings and the transcripts of the interview. The researcher explained that if they decide to participate voluntarily in the study, they would be requested to sign a consent form (See attached Annexure D). The researcher conducted a semi-structured interview with those who agreed to take part. After informed consent was established, the researcher proceeded with the interview.

## 1.7.4 INSTRUMENT OF DATA COLLECTION

The study used a semi-structured interview schedule (See attached Annexure E) to obtain data on the logistical, teaching and learning challenges experienced by undergraduate students with a visual impairment. The interview can be regarded as a social relationship in which information is exchanged between a participant and the researcher (De Vos et al. 2011:324). The primary method of data collection used in the study was the interviewing method. Data was collected by means of semi-structured interviews with the aid of an interview guide (Tutty et al., 1996:52). The interview guide provided a framework and the relevance of the study topic was covered during the discussion. To collect information, semi-structured, one-on-one interviews were conducted between April 2019 and September 2019. De Vos et al. (2011) state that semi-structured interviews are used primarily to get a clear picture of participants' beliefs about the specific topic. Questions about each issue were asked in an open-ended manner and at a time when it seemed to fit with each participant's narrative. All interviews were conducted in either English or Afrikaans and audiotaped with the consent of the participants.

De Vos et al. (2011) assert that an audio recorder permits for a more detailed record of the interview than notes taken during the interview. Therefore, an audio recorder was used to

record the interviews, so that the researcher could listen to the recording afterwards (and could do so more than once) to comprehend the views and beliefs of the participants. The researcher also requested permission from the participants to record the interviews. In addition, the researcher made use of field notes to record observations that would not be picked up by the voice recorder. Field notes and recorded conversations would be transcribed soon after the interviews had been concluded. Once all transcriptions were completed, time was dedicated to reading through all transcriptions in their entirety, to become immersed in the details and to make sense of the interviews (De Vos et al., 2011:409). As the researcher was reading these transcripts, notes were made as the initial step in the process of exploring the data (De Vos et al., 2011: 409).

## 1.7.5 DATA ANALYSIS

Data analysis is the process of interpreting and understanding data gathered through the association and reduction of both concrete and abstract information (Merriam, 2009; Babbie & Mouton, 2010). The transcribed interviews as well as the process notes made by the researcher served as raw data for analysis. The data was analysed and interpreted using thematic content analysis. "This process involved labelling and coding every item of information so that differences and similarities became evident" (Hancock, 1998:16). Thereafter, the researcher will engage in a "procedure of categorization of the verbal data for the purpose of classification, summarisation and tabulation', as recommended by Hancock (1998:17). The researcher then looked for themes, sub-themes and patterns that contribute to understanding how the participants in the study perceive their experiences with regard to logistical, teaching and learning challenges. The researcher summarised and interpreted the data in the research report by comparing it to existing data from the literature review. Finally, the data was presented in narrative, tabular or figure form (De Vos et al., 2011:418). Bryman (2012) states that thematic analysis is utilised in association with the analysis of qualitative data to refer to the abstractions of key themes in one's data. Therefore, the following steps were followed for data collection (Collis & Hussey, 2003). The first step involved converting the information collected into written form. The interviews were thus transcribed into documents, copying the content, by typing word for word. The second step involved the coding process. This was where similar trends within the data were detected through words and phrases. The third step focused on categorising the codes into smaller categories. This is where themes and sub-themes emerged, resulting in the data being reorganised and further classified. The fourth step paid attention to giving summaries

and putting the researcher's thoughts onto paper. The final step then focused on generalisations that could be made based on the findings. This entire process is reported on in Chapters Four and Five.

## 1.7.6 DATA VERIFICATION

In qualitative research, reliability and validity are conceptualised differently from how it is in quantitative studies. Instead, when the soundness of a qualitative investigation is assessed, the focus is on the credibility and dependability of the concepts (Babbie & Mouton, 2010). According to Merriam (2009:223), dependability denotes the extent to which research data can be duplicated should a similar study be carried out. The use of multiple data collection techniques, such as individual interviews and focus group discussions, safeguards the 'consistency and dependability' as well as the credibility of the investigation (Merriam, 2009:222). De Vos et al. (2011:419) argue that credibility and authenticity, transferability, dependability and conformability must be taken into consideration when establishing the truthfulness of qualitative research. For this reason, those characteristics were ensured for the study reported here. Each of them is briefly defined below.

- Credibility and authenticity

The goal of establishing credibility and authenticity is to ensure that the subject has been accurately identified and described. The researcher should question whether there is a match between the participants' views and the researcher's reconstruction and representation of them (De Vos et al., 2011). This was done through member checking on the criteria for inclusion to ensure that participants were credible for the purposes of the study.

- Transferability

De Vos et al. (2011) state that transferability involves the researcher asking whether the findings of the study can be generalised from one specific situation to another. Therefore, the study's findings were generalised to represent other students with visual impairment perceptions.

- Dependability

According to De Vos et al. (2011), dependability was established by the investigator asking whether the research process was logical, well-documented and audited. For the study, all the transcribed data from the interviews were submitted to the supervisor for a data audit.

- Confirmability

De Vos et al. (2011: 346) explain confirmability as an alternative to objectivity. It implies that the study findings could be confirmed by other researchers. Confirmability of the current study was ensured by means of literature control.

## 1.8 ETHICAL CLEARANCE

The study received ethical clearance from the Department of Social Work's Departmental Ethical Screening Committee (DESC) at Stellenbosch University, and from the Research Ethics Committee (REC) at Stellenbosch University. The notice of approval received from the REC, is attached as Annexure B. The researcher obtained institutional permission from the Senior Director at Stellenbosch University Division for Institutional Research and Planning (See attached Annexure A) as well as from the Centre for Student Counselling and Development, Disability Unit at Stellenbosch University to conduct research with undergraduate visually impaired students at Stellenbosch University (See attached Annexure C). The study was considered a medium risk study, since the participants were visually impaired and disability is a sensitive issue, as the students with visually impairment spoke about their personal experiences and challenges. As the study was medium risk, the following ethical issues were treated with due seriousness to ensure that no harm was caused by the study: avoidance of harm, voluntary participation, informed consent and confidentiality.

## 1.8.1 AVOIDANCE OF HARM

One of the most fundamental ethical rules to take into consideration in social research is that participants should not be harmed in any way (De Vos et al., 2011:115). According to Creswell (2003:64), the researcher has an ethical responsibility to protect his/her participants from any physical discomfort that may arise from participation in the research project. The researcher explained to the participants that the study was voluntary and that, if they were uncomfortable with any question asked, they could stop with the interview and the participant could withdraw at any time. The researcher knew the interviews could upset the participants and that they may have uneasy feelings afterwards. In order to compensate for this, the researcher set time aside at the end of the interview to find out whether participants needed debriefing. The researcher referred the participants to a qualified and registered social worker for debriefing at the Centre for Student Counselling and Development, Unit for Psychotherapeutic and Support services at Stellenbosch University.

Although all the participants had the option to make use of the debriefing services, it was not needed as all the participants was comfortable with the questions asked.

## 1.8.2 VOLUNTARY PARTICIPATION

De Vos et al. (2011:116) draw attention to the fact that participation in research should always be a voluntary decision, that is, no one should be forced to take part. Participants should be informed of the nature of the study and the topic that is to be investigated. They are free to decide whether they want to take part. All participants in the study participated voluntarily. They were all informed regarding the study and could decide whether they wanted to participate in the study. All participants were informed that they could withdraw at any time; therefore, no participants were forced to participate. De Vos et al. (2011) maintain that research should be based on mutual trust, acceptance, cooperation, promises and well-accepted conventions and expectations between all parties involved. This was kept in mind throughout the study.

## 1.8.3 INFORMED CONSENT

De Vos et al. (2011:117) state that obtaining informed consent covers the following aspects: all possible or adequate information on the goal of the investigation; the expected duration of the participant's involvement; the procedures which were followed during the investigation; the possible advantages, disadvantages and dangers to which respondents may be exposed; and the credibility of the researcher. All participants were informed about the study and were asked to give consent to participate. Informed consent was given in writing (on a consent form, which is attached as Annexure D), as suggested by Hakim (2000).

According to the requirements of the Research Ethics Committee of Stellenbosch University, the consent form, (Annexure B and Annexure D) was provided in an accessible format to the participant, to make it easier to read on their computers. An electronic consent form was emailed to all participants in a Word format, for them to be able to read and listen to it with JAWS software (speech recognition software) on their computers. The students with low vision also received it in a Word format to be able to use Zoom Text software to enlarge the consent form. The consent form was also available in both English and Afrikaans.

## 1.8.4 CONFIDENTIALITY

According to De Vos et al. (2011:120) confidentiality implies that only the researcher should be aware of the identity of participants. To ensure confidentiality in the study, all data gathered was kept in a safe- and security-coded hard drive, and in a locked cabinet to which only the researcher had access. De Vos et al. (2011) emphasise that every individual has the right to privacy, and that it is his or her right to decide when, where, to whom and to what extent his or her attitudes and beliefs and behaviour will be revealed. In addition, De Vos et al. (2011) state that privacy suggests personal privacy, while confidentiality refers to the handling of private information in a way that ensures that no others will have access to it. The privacy of the participants was protected by the study not mentioning their names. In addition, the researcher maintained the confidentiality of the Centre which supported the participants.

## 1.9 LIMITATIONS OF THE STUDY

De Vos et al. (2011) identify it as imperative that researchers should be able to recognise the limitations of their study, and to write these down. Limitations that were reflected on, include the following:

- This study was qualitative in nature; and thus, findings will not be generalised.
- The study was small; however, it still obtained a substantial amount of data for which a rich description was possible.
- The voice of academic staff lecturers as well as support staff rendering services to students with visual impairments were not elicited.
- The challenges which the Disability Unit practitioners and other support staff might experience in rendering services to students with visual impairment were not explored.

## 1.10 STRUCTURE OF STUDY

Layout of chapters of the thesis will be organised as follows:

- Chapter One – Research Introduction.
  This chapter presented the rationale, problem statement, research questions, goals and objectives of the study. It outlined ethical issues as well as, briefly, the process of participant recruitment, data collection and data analysis. Finally, the limitations of the study were presented.

- Chapter Two – First Objective – explanation of the nature and consequences of visual impairment for undergraduate students within the context of the ecological perspective.

  This chapter includes a comprehensive representation of the ecological systems perspective as a theoretical framework for the study, and the nature and consequences of visual impairment as a challenge experienced by persons with disabilities, focusing on undergraduate students with visual impairment.

- Chapter Three – Second Objective – explanation of the contextual analysis of disability in higher education and training in a South African context.

  The chapter presents a historical overview of disability in higher education in South Africa. In addition, the chapter presents the policies and legislation that protect students with disabilities as well as the statistical findings on higher education and training in South Africa and disability in a South African context.

- Chapter Four – Third Objective – exploration of logistical, teaching and learning challenges experienced by undergraduate students with visual impairments.

  This chapter presents the methodology, data collected, as well as the findings of the study, based on these data, on the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments in higher education.

- Chapter Five – Conclusions and recommendations

  This chapter presents the conclusions drawn based on the study, as well as recommendations of intervention strategies that can be implemented to improve support care services rendered to students with visual impairments in higher education institutions in South Africa.

## 1.11 CONCLUDING REMARKS

Based on the problem statement and the motivation for this study, as set out in this chapter, it should be clear that research is needed on the logistical, teaching and learning challenges which undergraduate students with visual impairments experience in higher education. The following chapters provide a description of the nature of visual impairment for undergraduate students within the context of the ecological perspective.

# CHAPTER TWO

# THE NATURE OF VISUAL IMPAIRMENT FOR UNDERGRADUATE STUDENTS

## 2.1 INTRODUCTION

One of the aims of this study is to gain in-depth understanding of the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments. To understand the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments, an analysis of the importance of employing the ecological systems perspective will be presented. Therefore, this chapter covers a comprehensive presentation of the ecological systems perspective as a theoretical framework for the study. First, a clear background and description of the ecological systems perspective is presented with a link to disability and visual impairment. Second, the nature of visual impairment is presented as a challenge experienced by people with disabilities, focusing on undergraduate students with visual impairment through the lens of the ecological systems perspective. Finally, a conclusion is provided to the chapter.

## 2.2 ECOLOGICAL SYSTEMS PERSPECTIVE

One of the aims of this section is to provide an analysis of the importance of employing the ecological systems perspective in social work. The actualities of students' experiences of their day-to-day encounters of logistical, teaching and learning challenges in various levels in universities, is the focus of the study. However, it is essential to look at students' experiences through the lens of an ecological systems perspective as a theoretical practice framework. The next discussion focuses on the following: a brief history of the ecological perspective as a school of thought and the purpose thereof as a scientific theory. It is followed by a discussion of the main concepts of the ecological systems perspective, which include the microsystem, the mezzo system, the exosystem as well as the macro system. For the sake of the study, Bronfenbrenner's model has been chosen as the bio-ecological perspective provides a multi-faceted model of human development. It could serve as a tool to aid in understanding the complexity of the influences, interactions and relationships between the individual person and all the other systems that are interconnected to the individual (Bronfenbrenner, 2005).

## 2.2.1 BRIEF HISTORY OF THE ECOLOGICAL SYSTEMS PERSPECTIVE

According to Lyner-Cleophas (2016), human dynamics are profoundly affected by participation and interaction. Bronfenbrenner (1979) has developed a theory for understanding how the individual interacts with social forces at a range of levels. He termed it the ecological systems theory. The first assumption of this theory is that 'human development takes place through processes of progressively more complex reciprocal interactions between an active, evolving bio psychological human and persons, objects and symbols in its immediate environment' (Bronfenbrenner & Ceci, 1994:572). Therefore, to understand a development process such as identity formation, one needs to take into consideration how these elements interact with one another and shape one's sense of self (Swart & Pettipher, 2011:10).

According to Greyling (2008), and Jacobs (2014), the ecological systems theory can be described as a 'nested arrangement of concentric structures' (Bronfenbrenner,1979:22), namely the microsystem, the mesosystem, the exosystem and the macro system. Bronfenbrenner (1979) proposes that these structures form part of the environment, which includes structures that involve direct and indirect influences that have the power to give meaning to certain situations. According to Lyner-Cleophas (2016), Bronfenbrenner (1979) later added the chronosystem, delegating the importance of time for development, as well as the essential component of individual differences in biology and personality.

## 2.2.2 THE PURPOSE OF A SCIENTIFIC THEORY

Encyclopaedia Britannica (1973) describes a scientific theory as the justification of some aspects of the natural world that can be empirically tested. In doing this, scientists pay attention to some careful observations, regularities and theories. The purpose of a theory is to assist with an in-depth appreciation of the world as well as gaining and attaining reliable knowledge (De Vos et al., 2011). For this study, the ecological systems perspective as a school of thought is utilised. This viewpoint creates the chance to see the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments at a selected university in South Africa. The main concepts of the ecological systems perspective are discussed below.

## 2.2.3 CONCEPTS OF THE ECOLOGICAL SYSTEMS PERSPECTIVE

This section presents the different concepts of the ecological systems perspective. The theory, visually depicted in Figure 1 below, was therefore renamed the bio-ecological model (Bronfenbrenner & Morris, 2006:793).
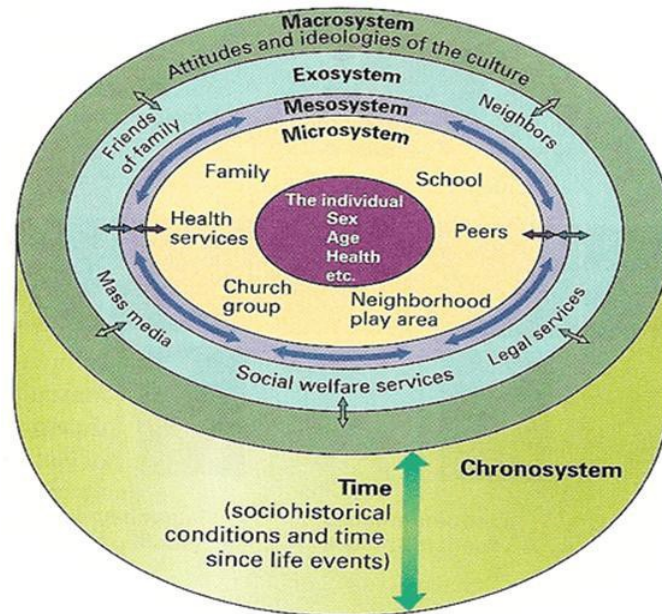


Figure 1: The bio-ecological model (Source: Bronfenbrenner & Morris, 2006:793)

### *2.2.3.1 The microsystem*

The microsystem is defined as the 'pattern of activities, roles, interpersonal relations and experiences by the developing person in a given setting with particular physical and material characteristics' (Bronfenbrenner, 1979:22). Therefore, it constitutes the daily face-to-face interactions that one may experience with people and objects in one's everyday life. According to Greyling (2008), and Lyner-Cleophas (2016), understanding of the microsystem guides this study in viewing the visually impaired student as an individual with unique characteristics, influenced by biology, as well as the different contexts with which the individual interacts. Lyner-Cleophas (2016) states that, for a student with a disability in higher education, the university as context with its range of systems would be significant. Access to health, quality of peer relationships and religious beliefs would form part of this system. In the micro system, the student with a visual impairment understands their disability and how they will have to adapt and function in an environment which does not always cater for their disability.

According to Lyner-Cleophas (2016), Bronfenbrenner (1979) states that, on the microsystem level, factors such as the condition of the person and biological factors are important. The person's personal self, self-concept and self-image would be significant and would contribute to the flow of relationships within the system. In effect, this will impact on how the student with a visual impairment would communicate his needs to support structures in the mezzo system. The academic ability of the student with a visual impairment and how well the student self-advocates will contribute to successful interactions with the system. The microsystem refers to the transition and entry into higher education of an individual student with a disability.

According to Gencoz and or (2006), Jacklin, Robinson, O' Meara and Harris (2006), Hopkins (2011), and Beauchamp-Pryor (2012), to move to the open wide spaces of a tertiary setting, bursting with new experiences, opportunities, and challenges, could be stressful and overwhelming for any student. In many instances, the transition marks the first break from the parental homes and introduces the first major step towards adulthood and independence (Parker,1999; Goode, 2007; Scott, 2009; Weedon & Riddell, 2009; Beauchamp-Pryor, 2013). Although students who are non-disabled experience challenges, the adaptation and transition to the tertiary environment is more complicated for students with disabilities. It often entails choosing the 'right' university which can render specialised support, renegotiating family relationships and time-consuming preparation and orientation (Hopkins, 2011; Beauchamp-Pryor, 2013).

At a micro system level for students with disabilities in the study of Beauchamp-Pryor (2013:126), independence meant 'finding a place where they fitted in and were included in their own right'. In selecting a university, the student with a disability often has to consider various aspects, such as the physical layout of the institution (McBroom, 1997). Beauchamp-Pryor (2013) confirms that visually impaired students sometimes select a university which is near their family and friends as support is more readily available. This support entails transport from and to the university and back-up support in case disability support at the university fails.

Elliot and Wilson (2008) hold the view that before a student with a visual impairment comes to university there is a lot of preparation to do, for example, contact the university office that renders services to students with disabilities, to orientate themselves in the new environment. Access to mobility orientation for visually impaired students is of the utmost importance, as they need to learn the accessible routes to class and back to their residences (McBroom,1997; Vancil,1997; Hopkins, 2011).

The microsystem is the most intimate and closest system to a person Parker (2011). According to Donald, Lazarus and Lolwana (1997), proximal interactions take place within this system and refer to the face-to-face, long-term relationships. This affirms that in the microsystem the visually impaired student needs to adapt to his/ her residence environment. This entails building relationships with the co-curricular structures on campus, for example, mentors, residence heads, house committee members and other students with disabilities, which could lead to long-term relationships.

## 2.2.3.2 The mezzo system

The mezzo system is defined as the 'system of microsystems' (Bronfenbrenner, 1979:25). Greyling (2008) states that the mezzo system comprises a group of associated microsystems which affect each other. Therefore, Lyner-Cleophas (2016) emphasises that, higher education students would influence each other in the university context. According to Nash, Munford and O' Donoghue (2005), and Bronfenbrenner (1979), the stronger and more diverse the interactions between the microsystems, the greater positive influence the mezzo system will have on the person. Moreover, Donald et al. (1997) refer to the positive influences as the local neighbourhood or student community in the case of a visually impaired student on campus.

The social experiences of students with disabilities can also be seen as a positive influence on the mezzo system. Beauchamp-Pryor (2012), and Taylor and Palfreman-Kay (2000) state that friendships lie at the heart of the student experience and, when friendships are formed between students with disabilities and students with no disabilities, a sense of togetherness and belonging is formed. The influence of family, peers, and the university, in the context of this research, will be relevant on this system.

According to Goode (2007), and Swart and Greyling (2011), it appears that successful interactions depend largely on the initiative of the student with disabilities. Therefore, students with disabilities take the lead in interactions with students with no disabilities. In a study by Hodges and Keller (1999), visually impaired students were seen taking the initiative as the stronger contributor to social involvement. These initiatives included assertiveness and managing the discomfort of sighted students (Goode, 2007).

However, external circumstances also played a role in the social exclusion of students with disabilities. According to Kilmurrary and Faba (2005), these circumstances occurred where the students with visual impairments lived, and involved whether they could read printed

notices, for example, posters of events. According to Swart and Greyling (2011), when the students with disabilities lived in a university residence, they felt more included in a social group, while those who lived off-campus had limited time to make friends. Hodges and Keller (1999) also state that it was very difficult for visually impaired students to participate in social activities. These events often take place after five o clock in the evening, at which times the students were already at home. In addition, it is difficult for visually impaired students as they are unable to drive, and extra funds are needed to get a taxi to return to campus to attend these socialisation opportunities.

In the study of Beauchamp-Pryor (2012), the visually impaired students were the group who strongly voiced their difficulty with social engagements compared to students with other disabilities. Visually impaired students do not feel included in the social aspects of tertiary life. Nevertheless, at the selected university, the student society for students with disabilities plays an extensive role in creating social events for all students with disabilities. The last two variables which influence the visually impaired student's challenges on the mezzo system would be physical accessibility and academic life.

The UNCRPD, (2007) regards accessibility, including the accessibility of the physical environment, as an important aspect of the ability to participate fully in all facets of life. More explicitly, in Article 9 of UNCRPD (2007), it states that government will also provide signage in Braille in facilities and services which are open to the public for people with visual impairments. Hurst (2009) states that visually impaired students might find the environment on campus inaccessible. In addition to Hurst (2009), in the South African study by FOTIM (2011), partially sighted students mentioned that they were unable to read signs on the campus. The visually impaired students who have depth perception also reported that stairs posed a particular challenge to them, as they did not know when the stairs ended. At the selected university, the stairs towards the library are an excellent example; therefore, the stairs are always painted with white lines to indicate the depth and where it ends. This is controlled by Facilities Management at the selected university.

In addition to stairs, Lourens (2015) indicates that there are other physical challenges in the environment for visually impaired students, for example, the physical layout of the universities is non-inclusive. Buzzers at traffic crossings would not only help students with visual impairments, but also people who could not see well at night, those with colour blindness, and students with attention deficit disorder. Hence, a concept of universal design was reflected in Shaw (2007).

The academic experiences of visually impaired students often entail the provision of reasonable accommodations (UNCRPD, 2007; WHO & World Bank, 2011). According to Mullins and Preyde (2013), these accommodations for visually impaired students were imperative for achievement in the academic terrain. These accommodations include adjustments to printed information/course material, PowerPoints, teaching methods and assessment techniques. Moreover, the university office that renders services to students with disabilities would provide all visual impaired students with electronic course material and books in the accessible format that they need. Students who are blind would also receive course material in a Braille format, if needed. All visually impaired students would make use of extra writing time during tests and exams and would also receive the question paper in an accessible format.

All service providers at the university, for example, support services, the psychologists, disability support officers, Braille officers, administrative support, residence placement officers, bursary officers, are part of the mezzo system for a student with a disability. Studies have shown that students with disabilities disclose their disabilities to the university at various times. Some students disclose on the application forms, some at registration, some during their studies, and some not at all (Jacklin, 2010; Kranke et al.,2013). Although when and whether to disclose was and should be the student's choice, they were formally entitled to support only upon disclosure (Jacklin, 2010; Lindstrom, 2014). With the confidentiality POPI act, universities were obliged to provide support only when students declared their disabilities and needs. However, the selected university provides a support form to all students with disabilities when they apply to the university and indicate on the application system that they have a disability. Those students give permission to the university on the form to liaise with relevant stakeholders on campus to provide a more specialised and unique service to the student with a disability.

### .2.3.3 The exosystem

According to Lyner-Cleophas (2016), factors in the exosystem are outside of a person's control, but still within the main environment of functioning. In higher education, the exosystem would include aspects such as the university policies on support to students with disabilities in the environment and how they impact on the student with a visual impairment. The exosystem does not have a direct impact on the developing person, although 'events occur that affect or are affected by what happens in the setting' of which the developing person is a part (Bronfenbrenner,1979:25). In this case, one would refer to the influence

that a parent's workplace can have on a family, or the nature of staff relations in a school setting and the impact of that on individual learners. Therefore, in exploring the challenges which visually impaired students experience in the exosystem, the researcher needs to understand that 'processes operating in different settings are not independent of each other' (Bronfenbrenner,1979:25). Lyner-Cleophas (2016) indicates that in the exosystem, the researcher will reflect on people's attitudes and on campus-wide collaboration between systems on campus. Therefore, some of those factors would have an impact on the student as well as on classroom and teaching practices.

According to Bronfenbrenner (1979), the exosystem consists of the interactions between the micro- and mezzo systems. These also include the settings or systems with which the individual does not necessarily have direct contact, but which may affect their experiences of these two systems (Chetkow-Yanoov,1997; Visser, 2007). The exosystem may include medical, educational and recreational resources and even the media that would influence the individual (Wait, Meyer & Loxton, 2005). Examples of the exosystem would be the education system, support services at the university, health services, the media, social welfare services, and legal services or community organisations (Donald et al., 1997).

### *2.2.3.4The macro system*

The macro system 'refers to consistencies in the form and content of lower-order systems (micro-, mezzo-, exosystem)' (Bronfenbrenner,1979:26). In addition, these consistencies are 'patterns of differentiation' such as one's culture, religious beliefs, ethnicity, socioeconomic status and even lifestyle. In addition, in the context of higher education, another element one could see as consistent is that of education policies and government laws concerning persons with disabilities. As Lyner-Cleophas (2016) states, policies for students with disabilities are made at a national and local level. The economy, political, socioeconomic and cultural factors impact on the student with visual impairment in this system, which is the campus environment.

The macro system is the wider system of ideology and the organisation of social institutions. This includes views on social class and gender roles, cultural values as well as the attitudes and values of people and policies that regulate behaviour (Visser, 2007). Cultural influences exist in all contexts within the ecological systems. According to Xu and Filler (2008), cultural influences guide a person's thoughts and feelings towards a specific experience as well as one's behaviour during social interaction. Lourens (2015) claims that the responsibility of inclusion often falls on students with disabilities themselves, and therefore a real concern

exists regarding those students who do not have an assertive personality. Students might have a need to self-advocate but might not have the necessary skills to do so (Lehmann et al., 2000; Taylor, 2004).

According to Lourens (2015), Beauchamp-Pryor (2012:181) define the tertiary approach towards visually impaired students as 'included, but not inclusive'. This means that the growing number of students with disabilities in higher education does not imply wider participation once they are there (Fuller, Healey, Bradley, & Hall, 2004; FOTIM, 2011; Goodley, 2011; Beauchamp, 2012; 2013).) Madriaga (2007) emphasises that the gap between policy and practice implementation still exists, leaving students without adequate support. According to Madriaga (2007), these gaps extend the unwillingness of lecturers to assist visually impaired students and it could lead to the opinion that we live in a disablist society. According to Lourens (2015), the accomplishments of inclusive education should not be denied as they led to policy development, but much more remains to be done.

At a macro systems level, policy development and the implementation of it, is of the utmost importance. In 2018 the Department of Higher Education launched the Strategic Policy Framework on Disability for the Post-School Education and Training System. This policy framework is a guideline and implementation tool for universities to render services effectively to students with disabilities. In March 2018, the selected university Senate approved the Disability Access Policy, by moving away from a disability policy to a more inclusive Disability Access Policy, where all sectors of the university are responsible for the inclusion of students with disabilities. Therefore, it is not just the priority of the university office that renders services to students with disabilities to cater for the needs of students with disabilities, but it is the responsibility of the faculties and other environments as well.

## 2.3 THE NATURE OF VISUAL IMPAIRMENT

In the following section, the nature and consequences of visual impairment will be discussed through the lens of the ecological systems perspective. To comprehend the nature and consequences of visual impairment, the meaning of visual impairment is first provided. According to Knouwds (2010), visual impairment is a complex term that includes a vast range of impairments all related to vision. Visual impairment can be defined as a loss of vision that, even with correction, negatively affects a student's educational performance (Heller et al., 1996). According to Silberman and Sacks (1998), there are three

subcategories of visual impairment which are legal blindness, functional blindness, and light perception. A brief discussion of the subcategories will follow:

### 2.3.1 Legal blindness

According to Hardman, Drew and Egan (2005:444), and WHO (2007), legal blindness is when vision 'cannot be corrected to better than 20/400 in the better eye or when the visual field is 20 degrees or less, even with a corrective lens'. It is stated by Corn and Koenig in Hardman et al., (2005) that legal blindness takes into consideration both the visual acuity and the field of vision. The Snellen Test measures visual acuity and, by doing so, determines the finest detail that the eye can make out. The expression of 20/400 means that 'the person with the visual impairment can see an object or symbol at 20 feet that a person with unimpaired vision can see at 400 feet' (Heller et al., 1996:217) or in metrical terms 6/60, meaning the person can see the object at 6 metres that a person with unimpaired vision can see at 60 metres (Landsberg, 2016). The field of vision refers to the ability of one's eyes to see objects in the periphery of one's vision when looking straight ahead. Persons who are considered blind can only see objects within 20 degrees or less when looking straight ahead; whereas persons with normal vision have a field of vision of 180 degrees (Hardman et al., 2005; Heller et al., 1996).

### 2.3.2 Functional blindness

Functional blindness is the label given to a student who is unable to use sight and must rely on his/her other senses to learn and to get around. In educational terms, blindness is described by focusing on the student's ability to use vision as a primary means of learning. The reason for assigning this label is to identify the educational adaptations (for example, teaching methods that rely on other senses) that need to be made to accommodate a student with functional blindness (Hardman et al., 2005).

### 2.3.3 Light perception

According to (Heller et al.,1996) light perception refers to students who are without sight, but who can distinguish between the presence and absence of light. According to Acera et al. (2015), keratoconus is a disorder of the eye which results in progressive thinning of the cornea. This may result in blurry vision, near-sightedness, irregular astigmatism, and light sensitivity, which could lead to poor quality of life. Landsberg (2016) states that there are

three risk factors which could be causes of visual impairment. These are environmental, disease, and congenital risk factors.

### Environmental risk factors

Landsberg (2016) states that environmental factors such as head injuries during child abuse, poor nutrition, accidents such as shooting and motor vehicle accidents, eye injuries caused by fireworks and ball games could be causes of visual impairment in the environment. More environmental factors which could lead to visual impairment include exposure to harmful household and cleaning products such as detergents, paints, pesticides, and glue.

### Diseases as risk factors

According to Landsberg (2016), another contributing factor is illnesses that a child may contract such as measles, diabetes, meningitis, and encephalitis. Diseases which cause retinitis pigmentosa include: Usher's syndrome, Leber's congenital amaurosis, Laurence-Moon-Biedl syndrome, and Bassen-Kornzweig syndrome (Silberman and Sacks, 1998; Hardman et al., 2005). Retinal detachment occurs when there is a separation of the neurosensory retina from the underlying retinal pigment epithelium, breaking the connection between the rods and the cones and the pigment layer (Landsberg, 2016). Retinal detachment can occur owing to a scarring of the vitreous cavity and retina, or leakage of fluid into the sub-retinal space. However, most detachments of the retina are due to breaks in the retina allowing fluid in the vitreous cavity to enter the sub-retinal space (Kwon Kang and Luff, 2008). The retina atrophies and a blind spot develops in the visual field. The detachment can be caused by diabetes, a blow to the head, a degenerative myopia, or trauma and is thus not hereditary (Silberman and Sacks, 1998). Without prompt medical care, the detachment might extend across the fovea or central macula, resulting in permanent visual loss and even complete blindness (Kwon Kang and Luff, 2008).

### Congenital risk factors

According to Landsberg (2016), the second factors which could lead to visual impairment are intrinsic factors. These factors are risk factors before birth (prenatal), such as rubella, lack of oxygen before and/ or during birth, and genetic eye conditions such as albinism. According to Landsberg (2016), visual disorders are often congenital in nature. However, a significant number of the disorders are acquired later in life, owing to infections and trauma to the eyes. Many babies born with visual disorders have some vision when they are still young but lose it later in life. It is therefore important to understand the nature of a student's visual impairment to provide the best possible medical care, learning support and education.

Greenfields (2011) states that Bronfenbrenner's model focuses on aspects such as social support, environmental barriers and social stereotypes that influence the individual. According to this perspective, development occurs as the result of individuals being embedded within a set of nested structures. As previously mentioned, the different levels of this model include the microsystem (patterns of activities and interactions in individuals' immediate surroundings), the mesosystem (connections among microsystems), the exosystem (settings that do not contain the individual directly, yet still affect them), and the macro system (larger systems of values, policies, customs, and resources). According to Knouwds (2010), the interaction between the person and different systems can either be negative, and therefore result in barriers of learning, or it can be positive and accommodate for and help the person to overcome barriers to learning.

## 2.4 CONCLUSION

This chapter covered a comprehensive presentation of the ecological systems perspective as a theoretical framework of the study. Bronfenbrenner's ecological systems theory was utilised to outline the nature of visual impairment as a challenge experienced by people with disabilities, focusing on undergraduate students with visual impairment significantly affecting functioning at a micro-, mezzo- and macro level. The next chapter provides a contextual analysis of undergraduate students with visual impairment in higher education and training in a South African context.

# CHAPTER THREE

# CONTEXTUAL ANALYSIS OF UNDERGRADUATE STUDENTS WITH VISUAL IMPAIRMENT IN HIGHER EDUCATION AND TRAINING IN A SOUTH AFRICAN CONTEXT

## 3.1 INTRODUCTION

One of the aims of this study is to provide a contextual analysis of disability, focusing on undergraduate students with visual impairment with regard to existing policies in higher education and training in a South African context. In order to provide such a contextual analysis, the following is presented: First, a brief historical overview is presented looking at pre- and post- 1994 on disability and higher education in South African. Second, the statistical findings of student with disabilities in higher education are discussed on higher education training and disability in a South African context. Third, an overview is presented of disability, focusing on visual impairment with regard to existing policies in higher education and training in a South African context. Finally, a conclusion is provided to the chapter.

## 3.2 A BRIEF HISTORICAL OVERVIEW OF DISABILITY IN HIGHER EDUCATION IN SOUTHERN AFRICA

Mutanga (2017) emphasises that South Africa has many anti-discriminatory legislative provisions. However, Crous (2004) reports that few people with disabilities engage in higher education and the small number who do access higher education face many challenges. According to Lourens, Watermeyer and Swartz (2019), as the South African government put numerous policies in place for the inclusion of students with disabilities, there were still many students with disabilities who could not access universities. Many students with disabilities find that they do not qualify for university as they do not meet the entry level requirements of South African universities, because a limited number of Grade 12 subjects, which they have qualify for the minimum requirements  to entre higher education. (Disability Alliance, 2017).

Lourens et al. (2019) question how students with disabilities who do meet the requirements to enter university experience the university environment. At least in terms of equal participation, inclusive policies have partly succeeded in infiltrating universities, to some extent. According to Lourens et al. (2019), the Education White Paper 6 is probably the most influential policy in higher education. This policy unequivocally stipulates that students with disabilities should have a fair and equal opportunity to access and succeed in higher education (DBE, 2001). To achieve these goals, two proposed strategies were put forward by the Education White Paper 6 (2001), namely removing all obstacles that hinder access and participation, and strengthening the ability and capacity of tertiary institutions to respond to the diverse needs of students with disabilities (Howell, 2006).

While the movement towards inclusive education gained momentum globally, South Africans witnessed and experienced transformation on an unparalleled scale. Howell (2006), Swart and Greyling (2011), Mutanga (2017; 2018), and Lourens et al.(2019), emphasise that the higher education system inherited by the new democratic government in South Africa in 1994 was one that had been moulded and shaped by a colonial history and by the ideology of apartheid. According to Lyner-Cleophas (2016), and DHET (2013), disability issues in South Africa are closely tied to the narrative of discrimination, exclusion, social isolation, and marginalisation. This recognition of the injustices of the past apartheid system and of colonial history, as well as the current climate of social transformation, makes the move towards social inclusion and the establishing of social justice in South Africa today significant to the inclusion of people with disabilities.

## 3.2.1 DISABILITY IN HIGHER EDUCATION PRE-1994

In the studies below several researchers refer to the exclusion of people with disabilities in South Africa during the apartheid period. Mutanga (2017) and Lourens et al. (2019) state that during apartheid it was inevitable that only white citizens were able to access well-resourced schools, universities, and other public services. During apartheid non- white students with disabilities were excluded from the educational system.

Approximately 80 % of students with disabilities were unable to attend any form of formal schooling (DBE, 2001). For students with disabilities who had access to education, the system segregated them into special schools and prevented them from encountering non-disabled students. Nel, Engelbrecht, Nel and Tlale, (2013) state that previously there was a notion that focused on the medical model, which stated that people with disabilities needed specialised care by medical practitioners in special schools, as they were ill. Unfortunately,

owing to the segregated education systems, the special schools which were attended by black students with disabilities were not well-resourced compared to those for white students with disabilities (Naicker, 2005). When students with disabilities were enrolled in mainstream schools, they were placed in special classrooms which separated them from others (Howell & Lazarus, 2003; Swart & Pettipher 2011). This exclusionary schooling system did not prepare students with disabilities to enter higher education and for most of them there was no progression to higher education after school. According to Mutanga (2017), these historical imbalances of apartheid and the conceptualisation of disability as an individual problem put barriers in the way of the complete inclusion of students with disabilities in South African higher education.

### 3.2.2 DISABILITY IN HIGHER EDUCATION POST -1994

The new government of 1994 introduced equal rights for all based on non-discrimination. The new Constitution of 1996 clearly stated that 'The state may not unfairly discriminate directly or indirectly against anyone on one or more grounds, including race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth' (RSA,1996, Article 9 [3]).

With this background in mind, citizens of all races were allowed, at least at policy level, to enter well-resourced schools and universities. So, since the advent of democracy in 1994, the South African government has been committed to the transformation of the education system, including higher education. Higher education systems in South Africa have been encouraged strongly to promote equal access to all qualifying students regardless of race, gender, language, age, or ability, and to increase their participation within these institutions. According to Howell (2006), within the overall equality framework there was a large focus on increasing the participation of black students in the higher education system. Nevertheless, disability is often overlooked despite it also forming part of the definition of equity of access to higher education institutions.

Mutanga (2017) states that, according to Howell (2006), although access of women and black students in higher education has increased, limited attention has been paid to students with disabilities. Therefore, Howell (2006) argues, students with disabilities continue to be excluded from higher education. Although the schooling system in the post-1994 period has the potential to support greater participation of students with disabilities in higher education, students with disabilities do experience challenges daily.

In the study the researcher explored the challenges faced by South African higher education by increasingly providing access and participation to students with disabilities which was indicated in the White Paper 6 and the National Plan for Higher Education. Researchers mentioned below state that some of the reasons for continued inclusion challenges for students with disabilities in higher education are linked to their schooling experiences. In addition, Howell and Lazarus (2003) emphasise that barriers within higher education relate to attitudes to disability, academic curricula, physical environments, teaching and learning support, and the allocation and distribution of resources. Howell and Lazarus (2003) argue that in addressing the challenges of increasing access and participation of students with disabilities in South African higher education, more needs to be done to attend to issues of student diversity and other challenges confronting higher education. Mutanga (2017) also argues that increasing student participation should be differentiated from making students fit into an unchanging education system. Therefore, policies in higher education should aim to accommodate a larger and more diverse population.

Matshedisho (2007) views his findings of the challenges which students with disabilities face when they access higher education from a human rights perspective. Matshedisho (2007) states that one of the difficulties of redressing unequal access to higher education for students with disabilities arises from the challenges of transforming formal rights on paper into real rights. He also states that South Africa seems to be moving along a contradictory path of espousing disability rights and the social model of disability yet remaining embedded in the practice and legacy of generosity. He argues that this is evident from the challenges faced by disability support services and the lack of political commitment to disability issues by government and higher education.

Mutanga (2017) indicates that since the promulgation of the White Paper in 2015, it seems that the South African government (through the Department of Higher Education and Training) is now committed to improving access, inclusion, and the success of students with disabilities in higher education. However, Lourens and Swartz (2020) state that most of the literature sketches a rather bleak picture of the experiences of disabled students in South African universities. Despite well thought-out inclusive policies and the supportive role of disability units, literature suggests that disabled students are still experiencing disability-related barriers during their university years. Lourens and Swartz (2020) indicate that those challenges include social isolation (Mutanga, 2017; Lourens & Swartz, 2016), difficulties navigating on campus (Lourens & Swartz, 2016), and late and inaccessible course material (Ngubane-Mokiwa, 2013).

Lourens and Swartz (2020) state that until 2013, disability units did not have enough funding to support the needs of all the students with disabilities at the universities (DHET, 2013; Disability Alliance, 2017). Encouragingly enough, the South African Department of Basic Education and Training identified the poor funding of disability units. Therefore, in the White Paper for Post-school education and training, they committed themselves to improving the situation (DHET, 2013).

In response to the Education White Paper 6, many disability units were established at most of the South African universitities (DBE, 2001; FOTIM, 2011). These units facilitated the equal participation of students with disabilities through the provision of academic support and specialised technical assistance. Apart from practical assistance, staff of the disability units typically play a mediating role as they have to communicate the needs of students with diabilities to faculty members. Futhermore, they advocate for these students and assist them with day-to-day challenges on campus (Matshedisho, 2010).

The African Union Heads of States adopted the Protocol to the African Charter on Human and People's Rights on the Rights of Persons with Disabilities in Africa in January 2018. This is the first legal instrument in Africa that promotes and protects the rights of persons with disabilities, and which places an obligation on countries in Africa to report periodically on measures taken to advance the rights of persons with disabilities on the continent. The protocol was negotiated with leaders of disabled people's organisations on the continent. It maintains the standards contained in the UN Convention on the Rights of Persons with Disabilities, but it provides an African perspective on measures required to change the lives of persons with disabilities in Africa. President Ramaphosa of South Africa, in his concluding remarks during his engagement with the disability sector at the Presidental Working Group on Disability in February 2019, undertook to expedite the signing of the the African Union Disability Protocol, followed by its ratification by Parliament immediately after the elections. The president repeated this commitment in his Human Rights Day address in Sharpeville on 21 March 2019. This protocol provides a legal instrument to promote, protect and ensure the full and equal enjoyment of all human rights by all persons with disabilities, and to ensure respect for their inherent dignity.

Mutanga (2017: 144) interrogates the role of a disability unit within most higher education institutions and those that have established 'special schools and classrooms'. If we had a fully inclusive higher education institution which caters for all disabilities, a disability unit would ideally not be needed. If all reading material were accessible for students who are blind. If all buildings were physically accessible for students in wheelchairs, for example, to

enter a building with a ramp, for wheelchair accessible bathrooms on every floor, access to lifts if stairs are unavailalble. For students who are blind to navigate on an accessible website. Nonetheless, there are some universities that are not fully inclusive. To address this issue, the Department of Higher Edcuation and Training in South Africa launched a new policy in 2018: the Stratetegic Policy Framework on disability for the post-school education and training system, to guide universities and FET colleges in striving to become more inclusive with universal design and access principles (DHET, 2018b). In collaboration with this new policy, the disability units still have a support role to play to empower students with disabilities to champion their inclusive rights.

To accentuate the importance of disability units, Lourens (2015) states that South Africa has gained significant ground since 1994 regarding the inclusion of students with disabilities in higher education. Lourens (2015 ) also indicates that the number of students with disabilities has increased on campuses where there is a disability unit (Howell, 2006).

According to Lourens (2015), finding new friends and forming a social network was sometimes a fortunate by-product of the disability units, as some students with visual impairments could become isolated as they find it difficult to interact with able-bodied students. Owing to their disability they do not see posters of events or pictures in email advertisements. The disability unit would send these notices or email communications in an accessible format to the students. Students with disabilities spend a considerable time on campus, meeting other students with disabilities and participating in societies for students with disabilities (social networks) on campus to support each other. Matshedisho (2010) emphasises that students with disabilities attribute their adjustment to the support of disability units.

According to Lourens (2015:105), it is encouraging that the growing recognition of these disability units as an important vechicle for inclusion has been mirrored in the establishment of HEDSA – Higher and Futher Education Disability Services Association; a body that represents disability units in higher education as well as in TVET colleges in South Africa. HEDSA is concern with matters around the achievement of equity, diversity and the inclusion of students with disabilities on tertiary campuses and in TVET colleges. Therefore, they were involved with the Green Paper of 2012 (DHET, 2012) on post-school education, as well as being involved in developing the new strategic policy framework on disability for the post-school education and training systems (DHET, 2018b). This policy emphasises the expansion of funding for students with disabilities, the establishment of new disability units

at prevously disadvantaged universities where there were no disability units, as well as the monitoring and evaluation of the implementation of the policy at diferent universities.

According to Howell (2006), as well as other researchers such as Matshedisho (2007), FOTIM (2011), Lourens (2015), and Mutanga (2018), disability units, especially in historically black higher education institutions, experience financial constraints. This lack of resources led to the disability unit at the university of KwaZulu-Natal being understaffed and not having sufficient equipment to provide academic support to students with disabilities (Sukhraj-Elry, 2008; Naidoo, 2010). As a result, the course material accessible to visually impaired students was often delayed, which left them with limited time to prepare for tests or examination assessments (Naidoo, 2010). Futhermore, where there is a lack of resources, for example, where not enough of computes and scanners are accessible, the students with visual impairements could not work simultaneously, which meant that they wasted time (Sukhraj-Ely, 2008).

According to Lourens (2015), disability units therefore had to raise external funding to make the environment more accessible for students with disabilities (Howell, 2006; Matshedisho, 2007; FOTIM, 2011). This lack of funding shed light on the lack of recognition by universities of the importance of a disability unit to a student with a disability as it infringes on the medical charity view of disability (FOTIM, 2011). Nevertheless, despite the limited funding, some small disability units still go the extra mile to make the university a positive experience for students with disabilities (Howell, 2006; FOTIM, 2011).

Mutanga (2018:145) stresses that the importance of disability units in the lives of students with disabilities cannot be denied. Caution is needed to avoid stereotyping students with disabilities and alienating them from the rest of the student population, while maintaining the same dominant culture that views people with disabilities as second-class citizens, who must only be assisted by the disability unit to fit into an 'unchanging' higher education system. Lyner-Cleophas (2016) and Mutanga (2018:145) emphasise that disability units should not be seen as the only way of responding to the needs of students with disabilities. It is extremely important to interrogate their role critically against principles of social justice, for example, a university's ability to create opportunities for all students to participate fully and to succeed in higher education in order for them to reach their goals and fulfil their aspirations.

## 3.3 STATISTICAL ANALYSIS OF STUDENTS WITH DISABILITIES IN HIGHER EDUCATION AND TRAINING IN A SOUTH AFRICAN CONTEXT.

Lourens and Swartz (2020) state that the initiative globally to welcome students with disabilities on university campuses is new. Since the late 1990s, more and more students with disabilities have been making their way into institutions of higher learning across the globe. The research below gives an overview of a statistical analysis of students with disabilities who have disclosed their disability to the higher education and training institutions in South Africa.
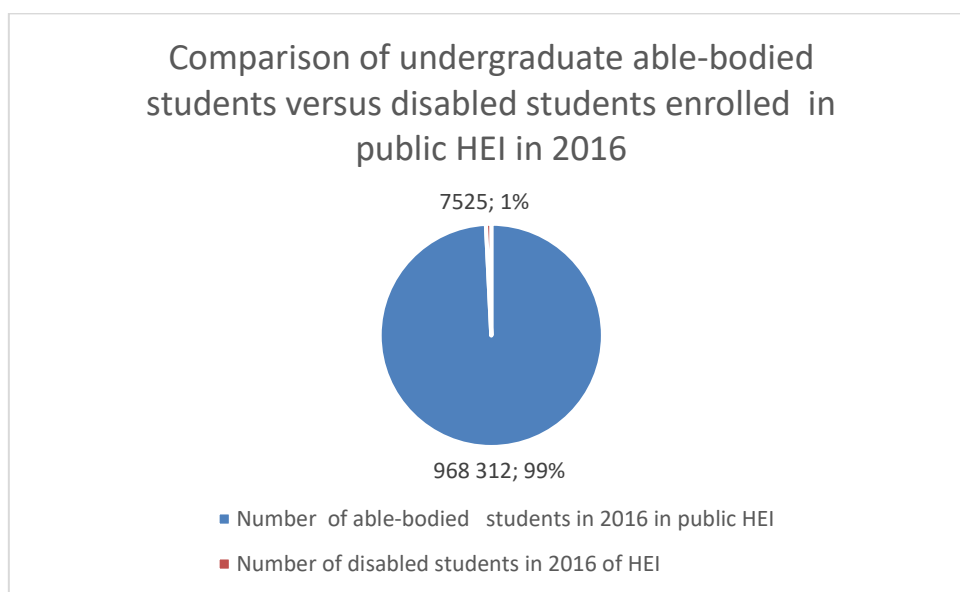


Figure 2: Comparison of undergraduate able-bodied students versus disabled students enrolled in public higher education institutions, 2016. (Adapted from Statistics on Post-School Education and Training in South Africa, 2016)

According to the Statistics on Post-School Education and Training in South Africa 2016, released in March 2018 by the Department of Higher Education and Training (DHET, 2018a), the following figure shows the number of disabled students in higher education. In the graph above, in 2016 only 1% of the number of undergraduate students with disabilities are enrolled in higher education institutions.
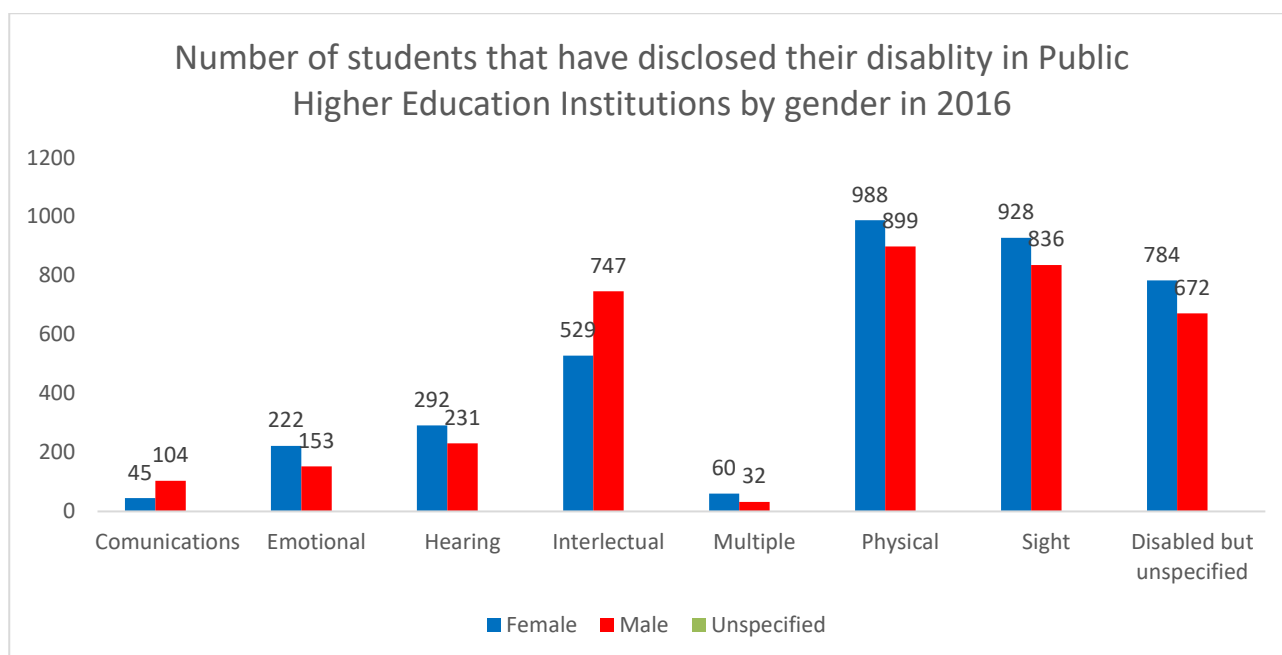
Figure 3: Number of students who have disclosed their disability in public higher education institutions by gender in 2016. (Adapted from Statistics on Post-School Education and Training in South Africa, 2016)

In 2016, just under 1% (7 525) of students enrolled in public higher education institutions in South Africa reported having some disability, of whom 51.1% (3 848) were female while 48.8% (3 674) were male students. Slight variations exist in tertiary enrolment between males and females. Almost half of the students reported physical and sight disabilities (1 887 or 25.1%, and 1 764 or 23.4%, respectively). Fewer students reported multiple disabilities (92 or 1.2%). According to the Strategic Policy Framework on Disability for the Post-School Education and Training System (2018), the South African Census (2011) reported that 11.1% of South African people had at least some difficulty performing functions, as described in the Washington Group questions, and estimated an impairment prevalence of 7.5% or approximately 2.9 million out of 38 million people.

According to the South African Census (2011), the Profile of persons with disabilities in South Africa reported that the majority of persons aged 20 – 24 years with severe difficulties across all functional domains were not attending any tertiary institution and did not have post-school qualifications. Only about 20% of persons with severe difficulties were attending tertiary educational institutions. Available data on the (HEMIS) Higher Education Management Information System shows a gradual increase in the number of enrolled students with disabilities at universities over the period 2010–2016, from a total of 5357 in 2010 to 7525 in 2016 (the total of students who disclosed their disability in Figure 3 above).

The category of disability that ranks highest is that of students with physical disability (1887), followed by visual impairment (1764), and those of with unspecified disabilities (1456). While the categories seem to be limited, there appears to be no differentiation between visually impaired and totally blind individuals despite the great difference in the approach or support technology required by these two categories.

## 3.3.1 SERVICES DELIVERY OF CENTRES FOR STUDENTS WITH DISABILITIES

The participation of students with disabilities was facilitated through support services offered by the majority of tertiary institutions (DBE, 2001; Matshedisho, 2010; FOTIM, 2011; Mutanga, 2017). These services, provided by disability units, included the conversion of printed material into Braille and large print, audio-recorded textbooks, the provision of extra time for examinations, computer centres with special software like JAWS for Windows (special screen-reading program), mobility training for visually impaired students, sign language interpreters for deaf students who use sign language as medium of communication (Howell, 2005; Matshedisho, 2010; FOTIM, 2011 ). According to Lourens (2015), apart from this technical assistance, staff of disability units typically also play a mediating role as they have to communicate the needs of disabled students to faculties. Disability unit staff futhermore advocate for support to students with disabilities and assist them with day-to-day challenges on campus (Howell, 2005; Matshedisho, 2010; Mutanga, 2017). These services to students with disabilities are guided by the White Paper 6 and the Strategic Policy Framework on Disability for the Post-School Education and Training System (2018).

Matshedisho (2010), FOTIM (2011), Lourens (2015), and Matunga (2018) all echo the importance of disability units, as they commonly believe that disability units play a central role in inclusion on some tertiary campuses. To provide an example, in the study of Matshedisho (2010), 25 % of students with disabilities felt comfortable and welcome on their first day at university. These students with disabilities indicated that they received support and assistance from their respective disability units. However, the 75% of students who felt uncomfortable on their first day at university reported that they did not have the support of a disability unit. Matshedisho (2010) states that it is evident that, in order to facilitate full inclusion, the disability units should generally provide more than mere academic support, but sould also assist students with disabilities with the adjustment to university life, for example, finding an accessible residence close to campus for the visually impaired students.

## 3.4 CONCLUSION

This chapter covered a comprehensive presentation of a contextual analysis of disability in higher education and training in a South African context. A historical overview was provided of disability in higher education in South Africa. The chapter also presented the statistical findings on higher education training and disability in a South African context. In addition, an overview was provided of service delivery of Centres for students with disabilities, guided by utilising existing policies in higher education and training in South Africa. Finally, a conclusion was provided. The following chapter will investigate the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments against the background of existing policies at a selected university.

# CHAPTER FOUR

# THE LOGISTICAL, TEACHING AND LEARNING CHALLENGES EXPERIENCED BY UNDERGRADUATE STUDENTS WITH VISUAL IMPAIRMENTS

## 4.1    INTRODUCTION

In this chapter, the findings of the study are presented on the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments. The first section of the chapter offers a discussion on the methodology utilised in the study as it was dealt with in detail in Chapter One. The second section focuses on the tabulated description of the participants. The third segment provides an exploration of the interview discussions that were undertaken, and the analysis is also presented in the form of themes, sub-themes, and categories. These themes, sub-themes and categories are recorded in a table and later, each sub-theme is debated in depth and supported with relevant literature. In addition, the empirical findings are presented within an ecological systems perspective as a theoretical substantiation. This chapter aims to investigate the logistical, teaching and learning challenges experienced by undergraduate students with visual impairment through the lens of the ecological systems perspective.

## 4.2    RESEARCH METHODOLOGY

Below is a brief description and reflection on the research methodology that was used for the study as discussed in depth in Chapter One. The research approach, research design, sampling methods, data collection and data analysis employed in the research are discussed briefly.

## 4.2.1 Research approach

A qualitative research approach was utilised to explore the logistical, teaching and learning challenges experienced by undergraduate students with visual impairment. The use of a qualitative approach enabled a comprehensive understanding of data gathered during the interviews, as it allowed the researcher to explore the assembled data. Merriam (1998:6) states that qualitative researchers are interested in understanding the meanings or

impressions people have constructed to make sense of their worlds. Henning, van Rensburg and Smit (2004:3) indicate that in a qualitative study the variables are usually not controlled because it is exactly this freedom and natural development of action and representation that it is wished to capture. Researchers want to understand, and explain in argument, by using evidence from the data and from the literature, what the phenomenon is that they are studying. Creswell (2007) asserts that qualitative research is a method of investigation in which scholars interpret what they see, hear, and comprehend. This approach is useful as they can explore how students with visual impairments express their views about their experiences and challenges on campus.

## 4.2.2 Research design

The study utilised an exploratory and descriptive research design. A research design, according to Mouton (2001:55), is a blueprint of how the researcher intends to conduct the research. According to Fouché and Schurink (2011), cited in De Vos et al. (2011:312), during the research process, qualitative researchers will create the research strategy or design best suited to the researcher, or will even design their whole research project around the strategy selected. In addition, Babbie and Mouton (2001:80) elucidate the fact that exploratory studies are done for better understanding and to test the possibility of more extensive research for the central concepts and constructs of the research; to establish priories for potential research, and to develop a new hypothesis about an active phenomenon. Kumar (2005) also states that exploratory research is utilised with the aim of investigating an area that has not been studied or where little is known about the phenomenon of study. This study included descriptive research, according to De Vos et al. (2011:96). Descriptive research presents a picture of the specific details of a situation, social setting or relationship and focuses on 'how' and 'why' questions. Exploratory and descriptive research designs were employed to allow for the opportunity to engage and share the challenges experienced by undergraduate students with visual impairments. This further promoted a deeper understanding by allowing the researcher to be practically involved in the process. The use of this design in collaboration with exploratory research therefore allowed for the development of new knowledge with regard to the topic of research.

# 4.2.3 Sampling method

According to Strydom (2011), in De Vos et al. (2011:223), a sample comprises elements or a subset of the population considered for actual inclusion in the study, or it can be viewed as a subset of measurements drawn from a population, in which the researcher is interested (Unrau, Gabor & Grinnell, 2007:279). Strydom (2011), in De Vos et al. (2011:224) states that a sample is a small portion of the total set of objects, events or persons from which a representative selection is made. The sampling method used in the study was non-probability sampling, to select participants purposively. In non-probability sampling, the odds of selecting a particular individual are not known because the researcher does not know the population size or the members of the population (Strydom (2011), in De Vos et al. 2011:231). Purposive sampling is considered entirely on the judgement of the researcher (Strydom (2011), in De Vos et al. (2011:232). The anticipated sample size of the study was 20 visually impaired undergraduate students registered at Stellenbosch University. However, Guest, Bunce and Johnson (2006) propose that when no new information, theme or sub-themes can be identified through having more interviews, data saturation has been reached. As a result, the researcher concluded with a sample size of 15 participants, as the narratives became repetitive with no new information being obtained. Bertaux (1981:35) supports the use of 15 participants as the smallest acceptable sample size when doing qualitative research if research data saturation has been reached.

The criteria for inclusion of participants were:

- A registered undergraduate student at the selected university, who has disclosed their disability.
- A student who has disclosed being a person living with visually impaired disability.
- A student who uses Braille, JAWS software (speech recognition software) or enlarged font.

The sample consisted of 15 participants who were undergraduate students and who had a visual impairment. All recruited participants in the study were requested to participate voluntarily in the study. The recruitment process of the study unfolded as follows. First, the researcher obtained institutional permission from Stellenbosch University to conduct the study (See Annexure A). Second, ethical clearance approval was obtained from the Research Ethics Committee for the Humanities at Stellenbosch University to initiate the study. Approval was granted (See Annexure B). Third, the researcher requested permission to establish communication with students with disabilities who use the Centre which renders

support services to students with disabilities (See Annexure C). Potential participants were informed via email about the study. The researcher began the process of data collection by contacting the potential participants who gave consent to the Centre. During the contact, the researcher introduced herself to the potential participants and explained the purpose and procedures of the research study. The researcher then established the readiness of the participants to participate in the research study. Permission was obtained from willing participants to tape record the interview (Tutty et al.,1996:67). The participants were informed about the confidential nature of the tape recordings and transcripts of the interview. The researcher explained that if they decided to participate voluntarily in the study, they would be requested to sign a consent form (See attached Annexure D). The researcher conducted a semi-structured interview with those who agreed to take part. After informed consent was established, the researcher proceeded with the interviews.

## 4.2.4 DATA COLLECTION

Since the research was qualitative, semi-structured interviews were utilised. Considering that the study focus was centred on investigating the logistical, teaching and learning challenges experienced by undergraduate students with visual impairment at a selected university, semi-structured interviews promoted in-depth exploration of the topic allowing the researcher to yield rich data. This was alluded to by Patton (2008) when sharing the view that the use of semi-structured interviews enables the researcher to engage with the participants and to understand the context within which the participants practise and interact. The use of semi-structured interviews promotes engagement and exploration as participants were asked open-ended questions on their logistical, teaching and learning challenges experienced at Stellenbosch University.

## 4.2.5 DATA ANALYSIS

Data analysis is the process of interpreting and understanding data gathered through the association and reduction of both concrete and abstract information (Merriam, 2009; Babbie & Mouton, 2010). The transcribed interviews as well as the process notes made by the researcher served as raw data for analysis. The data were analysed and interpreted using thematic content analysis. This process involved labelling and coding every item of information so that differences and similarities became evident (Hancock,1998:16). Thereafter, the researcher engaged in a procedure of categorisation of the verbal data for

the purpose of classification, summarisation and tabulation, as recommended by Hancock (1998:17). According to De Vos et al. (2011), data analysis is a method of conveying order, structure and meaning to the information collected in the empirical research process. Themes, sub-themes, and categories contributed to an understanding of how the participants in the study perceived their experiences with regard to logistical, teaching and learning challenges. Furthermore, recurring data patterns were identified while organising the participants' narratives. After some recurring data patterns were detected, categories were formed and classified under themes and sub-themes, with summaries related to the participants' narratives explained below the sub-themes and supported with relevant literature. Conclusions and recommendations were then drawn from the analysed data.

## 4.3  AREA OF DATA COLLECTION

This section will give a brief overview of the Stellenbosch University context by using the ecological perspective integrated in the analysis. In 2020, Stellenbosch University had approximately 31 540 students enrolled at the eight faculties on the main Stellenbosch campus, which include the Faculty of Medicine and Health Sciences situated on Tygerberg campus, the Business school in Belville and the South African Defence Force Military Academy in Saldanha (SU, Statistical Student Enrolment overview, 2020). The gender demographic profile of students at Stellenbosch University is 17 518 females and 14 010 males, with 12 students who did not disclose their gender. Of 31 540 students, 462 disclosed their disabilities at Stellenbosch University. That is 1.32 % vs 10 %–15 % of people globally who have a disability (SISS, 2020). The total of undergraduate students enrolled in 2020 was 20 272. The figure below shows types of disabilities disclosed by students from 2016–2020.

## STATISTICS: STUDENTS WITH DECLARED DISABILITIES

| | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| OTHER HEARING DISABILITY | 44 | 40 | 47 | 72 | 87 |
| OTHER DISABILITY OR CONDITION | 55 | 57 | 36 | 28 | 47 |
| CEREBRAL PALSY | | | | 2 | |
| OTHER VISUAL DISABILITY | 45 | 46 | 42 | 61 | 74 |
| BLINDNESS | 5 | 5 | 10 | 9 | 6 |
| CHRONIC HEALTH IMPAIRMENT | 46 | 48 | 49 | 34 | 34 |
| DEAFNESS | 15 | 17 | 23 | 23 | 18 |
| DIAGNOSED MENTAL HEALTH DISORDER | 25 | 29 | 53 | 73 | 78 |
| DIAGNOSED READING DISORDER | 38 | 45 | 46 | 27 | 34 |
| DIAGNOSED WRITING DISORDER | 14 | 17 | 17 | 20 | 14 |
| MOBILITY OR ORTHOPEDIC DISABILITY | 29 | 30 | 25 | 42 | 36 |
| NEUROLOGICAL DISABILITY | 23 | 17 | 16 | 23 | 26 |
| SPEECH DISORDER | 8 | 5 | 4 | 9 | 8 |
| GROOT TOTAAL / GRAND TOTAL | 347 | 356 | 368 | 423 | 462 |

Figure 4: Statistics: Students with declared disabilities 2016–2020, Stellenbosch University (Source: Student Information System (SISS) 2016–2020, Stellenbosch University)

Figure 4 above gives a five-year overview of students with disabilities who declared their disability to Stellenbosch University as from 2016–2020. (SISS, 2016–2020). The data show a gradual increase in the number of enrolled students with disabilities at Stellenbosch university over the period 2016–2020, from a total of 347 in 2016 to 462 in 2020 (as shown in Figure 4 above). The category of disability that ranks highest in 2016 is that of other disability or conditions (55), followed by chronic health impairments (46) and other visual disabilities (45). The category of disability that ranks highest in 2017 is that of other disability or conditions (57), followed by chronic health impairments (48) and other visual disabilities (46). In 2018, there was an increased in students with diagnosed mental health disorders (53) followed by chronic health impairments (49) declaring their disability, followed by other hearing disabilities (47) and other visual disability (42). In 2019 students with diagnosed mental health conditions (73) disclosed their disability more, followed by other hearing disabilities (72) and other visual disabilities (61). In 2020, students who declared their disability the most are other hearing disabilities (87) followed by diagnosed mental health disorder (78) and other visual disabilities (74) (SISS, 2016–2020).

## 4.4 BIOGRAPHICAL INFORMATION OF PARTICIPANTS

Table 1 reflects the identifying details of interviews with 15 participants who participated in the study (n=15 ). Codes were used for the primary interviews (A- Q) to substitute the names of the participants in order to ensure their anonymity. According to Strydom (2011), in De Vos et al. (2011:120), information given anonymously ensures the privacy of subjects. The information regarding the participants' identifying details was included in the interview schedule to build a profile of the participant contribution to the empirical investigation. The variables were: year of study, faculty, gender, type of visual impairment, causes of visual impairment, living in residence or private. This information is significant to the study as it is used to analyse the demographic information of the participants and to draw possible inferences from it. The use of codes protects the privacy of participants, mask participants' identities and cluster their academic courses into faculty of studies. Also, purposefully, age was not used in the details to protect participants' privacy, as there are only a few visually impaired students on campus and they could easily be identified. This was done to ensure that participants' identities are not compromised. Year of study was only included to show that the participants are registered undergraduate students.

Table 1: Biographical profile of participants

| Participant | Year of study | Faculty of studies | Gender | Type of visual impairment | Causes of visual impairment | Living in residence or privately |
|---|---|---|---|---|---|---|
| A | 5 | Economic and Management Sciences | Male | Myopia (Near-sightedness) | Biological | Private accommodation |
| B | 4 | Economic and Management Sciences | Female | Stargardt | Biological | Private accomodation |
| C | 2 | Theology | Male | Glaucoma | Biological | University residence |

| D | 4 | Arts and Social Sciences | Female | Drager syndrome and Glaucoma | Biological | University residence |
| E | 3 | Arts and Social Sciences | Female | Keratocus | Biological | University residence |
| F | 1 | Agri Sciences | Female | Heavy eye syndrome | Biological | Private accomodation |
| G | 2 | Engineering | Male | Hyperopia (Far-sightedness) | Biological | University residence |
| H | 4 | Arts and Social Sciences | Female | Keratocus | Biological | Private accomodation |
| I | 2 | Economic and Management Sciences | Male | Keratocus | Biological | University residence |
| J | 2 | Economic and Management Sciences | Male | Asen syndome | Biological | University residence |
| K | 1 | Arts and Social Sciences | Male | Myopia (Near-sightedness) and Hyperopia (far-sightedness) | Biological | Private residence |
| L | 3 | Sciences | Female | Autoiumune disease and Myopia(Near-sightedness) | Biological | University Residence |

| M | 3 | Engineering | Female | Extreme light-sensitive and Hyperopia (far-sightedness) | Biological | University Residence. |
|---|---|---|---|---|---|---|
| N | 4 | Sciences | Male | Astigmatism | Biological | University residence |
| O | 2 | Law | Female | Co-morbid autoimmune and Myopia(Near-sightedness) | Biological | University residence. |

## 4.4.1 Characteristics and contexts of participants

A brief summary of the participants who participated in the study will be provided below. This indicates the paticipants' year of study, faculty of studies, gender, type of visual impairment, causes of visual impairment, living in residence or privately.

### *4.4.1.1 Year of study*

The study only focused on the experiences of undergraduate students with visual impairment. All participants purposively selected were undergraduate students with a visual impairment disability. The majority of the participants were students in their second year of study, while a few were at their senior level (third year). The year of study was only included to show that the participants are registered undergraduate students. According to Lillywhite and Wolbring (2019:2), disabled students face various challenges within the higher education setting. Therefore, data should be available that provides insight into the situation of disabled undergraduate students as knowledge producers. Disabled undergraduate students could be involved in generating the evidence and knowledge missing in the social situation of persons with disabilities, given that they are experts in terms of their lived experience.

Furthermore, knowledge and evidence are expected to guide the development of policies. Disabled undergraduate students are well positioned to produce knowledge that fills existing gaps and could influence change. They have access to academic information such as academic databases via their university, which most persons with disabilities who are not students, do not have. However, Lillywhite and Wolbring (2019) acknowledge that there are vast differences between countries and institutions as to how much students and faculty, in general, have access to academic literature. Consistent with Lillywhite and Wolbring (2019), Howell (2006) states that, although at the schooling level the education environment now has the potential to support greater participation by disabled people in higher education, many barriers still remain. Some students with disabilities, upon entering higher education institutions for their undergraduate studies will always require additional, more cost-intensive support to access the curriculum. Such support should be part of academic development services, integrated into the general academic process. The researcher focused on undergraduate students with visual impairments as they need this cost-intensive support, provided by the Centre offering services to students with disabilities, as support services in partnership with the faculty.

### 4.4.1.2  Faculty of study

In this study, out of the fifteen (15) participants four (4) were from the Faculty of Arts and Social Sciences; four (4) were from the Faculty of Economic and Management Sciences; two (2) were from the Faculty of Engineering; two (2) were from the Faculty of Science; one (1) was from the Faculty of Law; one (1) was from the Faculty of Agri Sciences and the last one (1) was from the Faculty of Theology. During the study, in the Faculty of Arts and Social Sciences and the Faculty of Economic and Management Sciences, there was equal participation of the participants. Therefore, students with visual impairments do not mainly study Arts programmes (Faculty of Arts and Social Sciences), as previously stated by Lourens (2015:137). As specified in this study, participants are studying in various other faculties. It is approximately a reflection of all ten faculties represented at Stellenbosch University. Only students from the Medicine and Heath Sciences, the Faculty of Education, and the Faculty of Military Science chose not to participate in the study.

### 4.4.1.3  Gender

In the study, eight (8) of the participants were female and seven (7) were male. The majority of the participants were female, while the others were male. Lourens ( 2015 ) argued that

lower participation rates of males is not a novel occurrence. This assertion was prevalent in the study. Futhermore, Oliffe and Thorne (2007) cite that it is more difficult to recruit male participants compared to females. The South African Census (2011) indicates that disability prevelance by sex shows noticeble sex variations. The South African Census (2011) index shows that disability is more prevalent among females (8,3%) compared to males (6,5 %). For that reason more females participated in the study than males.

### 4.4.1.4   Type of visual impairment

In the study, the majority of participants – thirteen (13) – gave their formal diagnoses and two (2) participants did not have a formal diagnosis, as they were never formally diagnosed at their hospitals. Landsberg (2016:410) states that the most common eye conditions are refraction errors. The three main refraction errors are near-sightedness or myopia, far-sightedness or hyperopia, and astigmatism. The participants in the study had similar eye conditions, which were previously stated. Near-sightedness or myopia occurs when light rays do not focus on the macula but in front of it. This may be caused by an abnormally long eyeball or by an increase in the refractive power of the refractive media when the cornea is too round (Landsberg, 2016). This means that students can see objects close to them perfectly well but cannot perceive those at a distance clearly. For example, the PowerPoint slides might be unclear to see or the student cannot see notes on the board in a very large lecture venue.

According to Landsberg (2016:411), far-sightedness of hyperopia occurs when light rays fall on a point behind the macula instead of on it. The cause is an abbreviated eyeball or a weakness in the refractive power of the refraction media. It could be that the cornea on the eyeball may be too flat. Students suffering from hyperopia can see well at a distance, but their closer vision is poor. For example, to read learning material and books in class can be problematic. Landsberg (2016) states that astigmatism is an eye condition which is often associated with myopia or hyperopia and is caused by an uneven cornea. Light rays do not fall on the macula but behind and in front of it. Students with this eye condition find it difficult to distinguish between round letters such as B and D, or G and D, or R and S, which could be related to why they experience learning barriers.

Another type of visual impairment prominent in this study is the eye condition glaucoma. According to Landsberg (2016), congenital glaucoma can be present at birth or can develop at any time up to the age of three years. It happens when too much aqueous humour is produced in the front chamber of the eye and the outflow is restricted or blocked in some

way or other. Painless pressure builds up in the cornea and damages the optic nerve, causing loss of vision. Another type of visual impairment prominent in this study is Stargardt disease. (Zerberto, Lopes, Montilha & Gasparetto, 2015) Stargardt disease is one of the causes that leads to low vision. It is a hereditary progressive retinal dystrophy, autosomal recessive, usually bilateral that starts in the first two decades of life. Another type of visual impairment which is prominent in this study is keratoconus (Acera et al., 2015) Keratoconus is a disorder of the eye which results in progressive thinning of the cornea. This may result in blurry vision, near-sightedness, irregular astigmatism, and light sensitivity, which could lead to poor quality of life.

### *4.4.1.5 Causes of visual impairment*

In the study, nine (9) participants indicated that they were born with the visual impairment condition, meaning that it is congenital. Four (4) participants indicated that, owing to a disease, they are visually impaired.Two (2) participants indicated environmental factors caused a disease. The participants indicated and shared the causes of their disability, therefore the causes of visual impairment can be seen as biological. Causes of visual impairment can be categoriesed as factors from the environment, diseases, or congenital. Landsberg (2005) states that there are three risk factors which could be causes of visual impairment. These risk factors are congenital, environmental and diseases. The congenital factors are risk factors before birth (prenatal) such as rubella; lack of oxygen for a baby before and/or during birth and lastly, genetic eye conditions such as albinism. Environmental factors such as head injuries during child abuse, poor nutrition; accidents such as shooting and motor vehicle accidents; eye injuries caused by fireworks and ball games could be causes of visual impairment in the environment. The last risk factor is diseases, such as when an individual may contract measles, diabetes or meningitis, which could cause visual impairment.

### *4.4.1.6 Living in residence or privately*

Participants were asked to indicate their accomodation on campus. The majority of participants –ten (10) – indicated that they are staying in a university residence. Few indicated that they stay in a private accommodation closer to the university campus with short travelling distance. According to Lyner-Cleophas (2016), students with disabilities found residence placement on campus, which is near to the faculty, to be convenient. Participants motivated their choice for staying in a university residence on campus, as there is limited transport for persons with disabilities in town. In agreement, Watermeyer (2013)

and Watermeyer and Swartz (2008) aver that public transport in South Africa is mostly inaccessible for persons with disabilities.

## 4.5 THE LOGISTICAL, TEACHING AND LEARNING CHALLENGES EXPERIENCED BY UNDERGRADUATE STUDENTS WITH VISUAL IMPAIRMENT

In this section, an in-depth understanding of the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments at Stellenbosch University is presented using themes. Sub-themes and categories identified from the data are presented in accordance with participants' responses. The sub-themes identified will also be associated to the micro-, mezzo- and macro levels of the ecological systems perspective.

### 4.5.1 Emerging themes, sub-themes and categories

From the 15 qualitative interviews that were conducted, the three themes that emerged from the empirical study, as well as the sub-themes and categories that were identified, are presented in Table 2 below.

Table 2: Themes, sub-themes and categories

| Themes | Sub-themes | Categories |
|---|---|---|
| 1.Logistical, teaching and learning challenges | 1.1. Micro: Logistical challenges | a. unable to read signage on notice boards.<br>b. unable to see lecturer's notes displayed on a PowerPoint projector and chalkboard.<br>c. Limited accessible entrances |
| | 1.2. Mezzo: Technological challenges | a. use of computer with assistive technology<br>b. obtaining study and reading material in a soft copy (accessible format)<br>c. online assessment challenges |

| | 1.3. Macro: Transportation challenges | a. accessible shuttle service<br>b. safety issues<br>c. policy implementation |
|---|---|---|
| 2. Experiences of students with visual impairments | 2.1 Micro: Social participation | a. linkage with other students<br>b. participating in residence activities<br>c. factors which hinder social participation<br>d. personal challenges |
| | 2.2 Mezzo: Classroom experiences | a. assessment accommodations<br>b. lecturers' attitude |
| | 2.3 Macro: Policy awareness | a. involvement in policy consultation<br>b. inclusive education, universal access, and design<br>c. participation in official student societies |
| 3. Support available at the selected university | 3.1 Micro: Individual knowledge on support structures | a. lack of knowledge on available support<br>b. willingness to access support |
| | 3.2. Mezzo: Awareness of services | a. university office which renders services to students with disabilities.<br>b. university office which renders specialised services to students with visual impairments<br>c. faculty support |
| | 3.3. Macro: Physical environment support | a. mobility orientation on campus<br>b. facilities management support<br>c. funding access<br>d. other support |

## 4.6  THEME 1: LOGISTICAL, TEACHING AND LEARNING CHALLENGES

In this subdivision, the experiences of visually impaired undergraduate student participants is presented.

### 4.6.1 Sub-theme 1.1 Micro level: Logistical challenges

Below is a presentation of the categories of participants' logistical challenges at micro level on campus. This is offered in the context of Categories (a) and (b) below.

#### 4.6.1.1  Category (a): unable to read signage on notice boards

In the study, the majority of the participants indicated that they could not read the signage on notice boards on campus. This was outlined in the following narrative:

Participant B stated:

> 'When I walk to class, I make use of a guide dog, as I could not see the signage on notice boards'.

The narrative above clearly indicates that the students with visual impairments experience challenges related to the physical layout of passages and the presentation of signage. It is thus evident that the findings confirm what Hurst (2009) stated, that visually impaired students might find the environment inaccessible. The South African study by FOTIM (2011), also indicated that partially sighted students are unable to read the signs on the campus.

#### 4.6.1.2  Category (b): unable to see lecturer's notes displayed on a PowerPoint projector and chalk board

In the study, the majority of participants indicated that they are unable to see the lecturer's notes displayed on a PowerPoint projector and on the chalkboard. A few of the participants indicated that some days they can see lecturers' notes on the PowerPoint and the chalkboard. This was outlined in the following narrative:

Participant M stated:

> 'I struggle to see the PowerPoints in class, and I sometimes struggle to see clearly on the board even if I sit in front of the class'.

The narrative above clearly indicates that the students with visual impairments still experience difficulties to see lecturers' notes in class on PowerPoint or on chalkboards. It is

thus evident to say that the findings confirm Howell's (2006:168) statement that students with disabilities experience difficulties in class. Furthermore, Swart and Greyling (2011) argue that teaching technologies used in the classroom can cause problems as students with visual impairments could have difficulties in seeing the contents of transparencies or PowerPoint slides. Crous (2004) suggests that students with visual impairments should receive copies of transparencies before class discussions. Lourens (2015) emphasises inclusive practices as universal design for instruction (Scott & McGuire, 2006) and universal design for learning (Hall & Stahl, 2006) should be followed. By means of following universal design for learning practices, the lecturers should always read out what is written on the whiteboard, or PowerPoint slides for students with visual impairments to follow in class and participate in discussions, without alerting lecturers to their disability.

### 4.6.1.3   Category (c): limited accessible entrances

In the study, participants indicated that they struggle to access buildings and to walk on inaccessible routes to class. This was outlined in the following narrative:

Participant C stated:

> *'When I walk to class with my white cane, I make use of tactile paving. The challenge is when there is no tactile paving on the sidewalks or it is not wide enough, then I sometimes get lost. By getting lost, I sometimes end up being late for class, and miss out on valuable work done in class. There is also no tactile paving or strips on stairs to indicate the beginning of stairs'.*

The narrative above clearly indicates that the students with visual impairment still experience difficulties in accessing buildings when using inaccessible stairs or sidewalks without tactile paving, which makes the sidewalks inaccessible routes to use to class. It is thus evident that the findings confirm Hurst's (2009) statement in the South African study by FOTIM (2011) that visually impaired students who have depth perception problems also reported that stairs posed a particular challenge to them, as they did not know when the stairs ended.

In addition to stairs, Lourens (2015) indicates that there are also other physical challenges in the environment for visually impaired students, for example, the physical layout of the universities are non-inclusive. Buzzers at traffic crossings would help, not only students with visual impairments, but also people who could not see well at night, those with colour blindness, and students with attention deficit disorder. Hence, Shaw (2007). Reflected a concept of universal design. However, some universities remained out of reach for students

with disabilities, because of inaccessible physical layout (Riddell, 2005; Redpath et al., 2013; Lourens, 2015). As the UNCRPD (2007) stipulation assumed, these physical barriers sometimes spilled over into other areas of life, affecting students' ability for 'full participation'. A potentially 'affected'' area could be the academic performance of students with disabilities (Hanafan et al.,2007), as students with visual impairments can get lost and not be on time for classes, as confirmed by Participant C.

## 4.6.2 Sub-theme 1.2 Mezzo level: Technological challenges

Participants was asked to share their technological challenges on a mezzo level. Below are the identified categories (a) (b) and (c) and the narratives presented.

### *4.6.2.1 Category (a): use of computer with assistive technology*

The majority of the participants indicated that they find it challenging when they must access their class notes or submit assignments on the online learning management system with their assistive technology on the computer. Participants further added that they experience challenges in navigating various websites for educational purposes. This was outlined in the following narrative:

Participant B stated:

> *'Due to my visual impairment, I struggle to navigate the online learning management system as I have to enlarge everything, with Zoom Text software; therefore, I can't see the whole document and I miss the submit button when I have to submit an assignment. Also on the University website, the images don't have captions. When I have to enlarge the images to see it, it gets distorted. It is challenging as I miss a lot of information'.*

The narrative above clearly indicates that students with visual impairments still experience technological challenges when accessing the online learning management system to obtain reading material, submit assignments or see their marks. It is thus evident that the findings confirm what Mutanga (2018) states, that assistive technology enhances access to learning for students with disabilities, but it could also excludes other students. He states that the role of assistive technologies is key in the construction of inclusive environments to eradicate injustices. In the study of Mokiwa and Phasha (2012) they indicate that JAWS (Job Access

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With Speech) software for visually impaired students could not read mathematical and scientific signs or graphic material. Hence, the above clearly indicates that visually impaired students do experience technological challenges when using the computer with assistive technology. This confirms the findings of Mutanga (2018).

### 4.6.2.2   Category (b): obtaining study and reading material in a soft copy

In the study, the majority of the participants indicated that they obtained study and reading material in a soft copy which is in an accessible format to read. This was outlined in the following narrative:

Participant C stated:

> *'It takes longer for me to get information (books and notes) as sighted students. Sighted students can go to the library, get resources and immediately work on assignments. My books and lecturers' notes first needs to be send to the Braille office and be converted in an accessible format for me to read. Then it comes back to me. It takes longer for me to start with assignments as I sometimes have to wait for 10 days or 14 days for my books and reading material to come back from the university's office who render specialised services to students with visual impairments."*

It is thus evident to say that these findings confirm what Lourens (2015) alludes to – the fact that disability units were often responsible for the conversion of academic texts, material or books into an electronic format (Sukhraj-Ely, 2008). Lourens (2015) states that visually impaired students occasionally receive their course material late, owing to the time-consuming nature of conversions, which are done by a few staff at under-resourced disability units (Seyama, 2009; Ngubane-Mokiwa, 2013). The above clearly indicates that visually impaired students do experience challenges when obtaining study and reading material in an alternative format to read. This confirms the findings of FOTIM (2011) and of Lourens (2015).

### 4.6.2.3   Category (c): online assessment challenges

In the study, the majority of participants indicated that they experience challenges with undertaking online assessments. This was outlined in the following narrative:

Participant B stated:

> *'As I am partly sighted and not completely blind, I use Zoom Text software to enlarge everything on the computer. During Tests and exams, I write in the assistive technology room, with assistive technology on computer to write a tests or exams. The university office who provides services to students with disabilities provide me with a enlarge font question paper. Without their assistance I would not be able to see my questions paper or answer it correctly'.*

Additionally, during examinations the university office which provides specialised services to students with visual impairments and the examination office would work in collaboration to provide accessible question papers to all students who disclosed their visual impairment to the university. The accessible format can be a soft copy of the question paper, or an enlarged copy of the question paper, or it could be in Braille format. Students with visual impairments do have the opportunity to answer the question paper on computer with assistive technology such as JAWS software or Zoom Text. A student who is blind and uses Braille to read, could request the question paper in Braille but needs to answer it on computer with assistive technology such as JAWS software. To accommodate all the reading and the use of a computer with assistive technology, visually impaired students would make use of concessions such as extra writing time and the use of a computer with assistive technology during tests and examinations. For students with disabilities to obtain these concessions they need to apply formally and receive an official approved concession letter from the university. This was outlined in the following narrative:

Participant C added:

> *'As a legally blind student, when writing tests and exams I need my question paper in an accessible format (soft copy) to be able to read it with assistive technology (JAWS software) on my computer. From experience, assistive technology such as JAWS software cannot read foreign languages such as Greece and Hebrew; therefore, I would need the question paper in Braille format to be able to read it. As it takes me longer to read Braille, I use concessions such as extra writing time and use of computer with assistive technology during online tests and examinations to provide my answers on computer with assistive technology (JAWS software). Without these concessions I would not be able to do academically well'.*

It is thus evident to say that these findings confirm the findings of Mullins and Preyde (2013), and Lourens (2015). The academic experiences of visually impaired students often entail

the provision of reasonable accommodations (UNCRPD, 2007; WHO & World Bank, 2011). According to Mullins and Preyde (2013), these accommodations for visually impaired students were imperative for achievement in the academic terrain. Accommodations include adjustments to printed information/course material, PowerPoint, teaching methods and assessment techniques. Hence, the above narratives clearly indicate that visually impaired students do experience challenges during online assessments, when writing tests and examinations, since a variation of concessions and technical support is needed, to perform well academically. As students with visual impairment do experience online assessment challenges when doing assessments, they do need assistive technology on their computers to support them while undertaking assessements.

### 4.6.3 Sub-theme 1.3 Macro level: Transportation challenges

Below is a presentation of the categories of participants' challenges on a macro level at Stellenbosch University. This is offered in the context of Categories (a) (b) and (c) below.

#### *4.6.3.1   Category (a): accessible shuttle service*

The majority of the participants indicated that they make use of the current shuttle service and do experience challenges when they use it, as it is not accessible for students with disabilities. This was outlined in the following narrative:

Participant D stated:

> '*The new shuttles (bus) do have more seats in and have less space then the older buses. The older buses had less seats, but it had more space for my guide dog. If it rains and I use the shuttle, it is very difficult for my guide dog to get out as the space is very limited'.*

As Mutanga (2017:6) states, universities need to identify the needs of students with disabilities and to provide according to their needs, such as a university bus to take students with disabilities to class and back to residence, as well as shopping for essential food and other needs as local taxis are reluctant to transport them (if they have a guide dog) or charge double if they travel with a wheelchair. Mutanga (2017:6) also states that the transportation needs to be a universally accessible transport system for all students. The selected university in the study, does have a shuttle service; however, the challenges that visually impaired students with guide dogs face is that it is not accessible for the guide dogs or not wheelchair accessible. There is not enough space in the shuttle service, and it does not

travel all routes to class and back to residence on campus, especially in winter months with heavy rain. It is evident to say that this confirms the findings of Mutanga (2017).

### 4.6.3.2   Category (b): safety issues

In the study, the majority of participants indicated that they experience safety issues and therefore do not participate in activities late at night. The university's current shuttle service does not drive all routes, and this makes it difficult to participate in activities or to go to the library after hours as it is a safety risk. This was outlined in the following narrative:

Participant H stated:

> *'I do not engage that much on campus and I do not belong to any societies. … I really want to be part and engage in social activities, but I stay in flat on campus and it is very unsafe to walk in the dark at night alone. The shuttle service also does not drive all the routes, so I do not participate'.*

It is evident to say that the findings confirm what Hodges and Keller (1999) state, that it is very difficult for visually impaired students to participate in social activities. According to Lyner-Cleophas (2016), the illegal parking of cars on pavements and in disability parking bays remains an ongoing problem for students with disabilities on campus. The renovating of buildings that result in obstructions for students in wheelchairs or for those who are blind continues to pose a barrier and a safety risk to students, as the students with visual impairments cannot see the cars which are parked on pavements or when buildings are renovated. Hence, the above clearly indicates that visually impaired students do experience safety challenges on campus, and an accessible shuttle service which drives all the routes, would make it easier for students to participate in activities after hours.

### 4.6.3.3   Category (c:) policy implementation

The majority of the participants indicated that they consider policy implementation to be a challenge. In the study, only one (1) participant indicated involvement in the policy implementation of students with disabilities at the selected university. At present, the Disability Access Policy (2018) is relatively new, and it is still seen as the policy of the university office that renders services to students with disabilities. The university environment needs more sensitisation and training on the new policy. This was outlined in the following narrative:

Participant B stated:

> '*As I was an active member of the student society for students with disabilities, I am also involved with the implementation of the Disability Access Policy, as I am assisting the university office that render services to students with disabilities, as a student representative with co-facilitating at workshops for staff and students'.*

According to Lyner-Cleophas (2016: 234), there is evidence that the university is moving in the right direction regarding policy changes and incorporating students with disabilities as part of its diversification and inclusivity profile. The IIS (2013–2018) (SU, 2013) SU strategy reflects the innovative and future-focused vision of inclusion at SU. The new strategy is the Strategic Framework (2019–2024). SU aims to become what distinguishes us from other universities. Hence, the above clearly indicates that visually impaired students are involved in the implementation on the new policy, but more can be done. As Lyner-Cleophas (2016) argues, the role of top management cannot be underestimated in ensuring that policies, their management, and their implementation are integrated and embedded into the operations of SU. Implementation implies a process of training that would need to happen from top management and filtering down to all departments and staff, in a systemic way. Lyner-Cleophas (2016) emphasises that, in that way, we create a disability-inclusive SU that is rights-based and that has gone through a process of critique. In agreement with Lyner-Cleophas' (2016) statement above, Howell (2005) stresses that the entire campus, and not only the disability support office, is responsible for fostering a diverse campus climate and for addressing students' diverse needs.

## 4.7  THEME 2: EXPERIENCES OF STUDENTS WITH VISUAL IMPAIRMENTS

In this subdivision, the experiences of visually impaired undergraduate students will be presented. Sub-themes and categories identified from the data are presented in accordance with the participants' responses. The sub-themes identified will also be associated with the micro-, mezzo- and macro levels of the ecological systems perspective. Categories are designed according to participants' reponses and will be discussed below.

### 4.7.1 Sub-theme 2.1 Micro level: Social participation

Below is a presentation of the categories of participants in terms of their social participation experiences at micro level on campus. This is offered in Categories (a), (b) and (c) underneath.

### *4.7.1.1 Category (a): linkage with other students*

According to Lourens (2015), social participation of persons living with disabilities is often experienced in various ways. In the study, the majority of participants indicated that they prefer to socialise more with students with disabilities, as they support each other and experience the same challenges, than with non-disabled students. This was outlined in the following narrative:

Participant D stated:

> *'I socialising with my friends who are disabled on a different level. Because some of them also have a visual impairment as me. We enjoy jokes which only is funny to us visually impaired students. I feel my friend with disabilities understands me as we share the same challenges on campus. They are also very helpful with advise on how to handle situations as they experienced it as well'.*

The narrative above clearly indicates that the students with visual impairment would socialise more with their visually impaired friends. As peers they share some of the same experiences as another visually impaired student and would support each other and give advice as needed. In agreement with Lourens (2015), Swart and Greyling (2011) state that students with disabilities regardeed the practical and emotional support from peers to be very important, and the lack thereof was experienced as a barrier. Therefore, the knowlegde, guidance and experience of support from older students with disabilities are considered to be valuable resources of information about services, advocacy and support.

### *4.7.1.2 Category (b:) participating in residence activities*

The majority of participants who reside in university residences indicated that they experience challenges in participating in residence activities owing to their visual impairment. However, few of the participants indicated that living in a residence does not present any experiences owing to their visual impairment. This was outlined in the following narrative:

Participant I stated:

> *'In residence I do not participate in social events, due to my visual impairment. I do feel isolated and feel there is not a lot of stuff which I can do. I really wanted to play table tennis for my residence, I tried but it was very hard. I could not see the ball and I stopped trying'.*

It is thus evident to say that these findings confirm Lourens' (2015:193) statement that it was often difficult for students with visual impairments to participate in all social activities in residences. Visually impaired students find it difficult to play sports, for example soccer, in the residence, as they cannot see the ball. It was therefore often difficult for visually impaired students to find someone who shared their interests and abilities as these are mostly centred around inaccessible socialising activities like watching rugby matches. Hence, the above clearly indicates that students with visual impairments experience difficulties in participating in activities in residences.

### 4.7.1.3 Category (c): factors which hinders social participation

In the study the majority of participants indicated that they do not participate socially in functions on campus after hours, since owing to their visual impairment they cannot drive or do not have the extra funding to pay for a taxi or Uber as the university shuttle service does not operate after hours. This was outlined in the following narrative:

Participant H stated:

> *'I do not engage that much on campus and I do not belong to any societies. I really wants to be part and engage in social activities, but I stay in flat on campus and it is very unsafe to walk in the dark at night alone. The shuttle service also does not drive all the routes, so I do not participate As a NSFAS bursary student I also do not have extra money to get alternative transportation as a taxi go to events after hours'.*

The narrative above indicates that students with visual impairment do feel unsafe when walking alone at night on campus, as the shuttle service does not drive all routes, which excludes them from participating in activities after hours, as confirmed by Hodges and Keller (1999), as well as by Lourens (2015). Hodges and Keller (1999) emphasised that it was very difficult for visually impaired students to participate in social activities. These events often take place after five o' clock in the evening, at which times the students were already at home. In addition, it is difficult for students with visual impairment to participate in social activities since owing to their visual impairment they are unable to drive and do not always have extra funds to get a taxi or alternative transportation to return to campus to attend these socialisation opportunities.

### *4.7.1.4  Category (d): personal challenges*

In the study the majority of participants indicated that they experience personal challenges owing to their visual impairment. This was outlined in the following narrative:

Participant B stated:

> *'I have negative experiences on campus, but it has nothing to do with the university services, as it had more to do with people's attitude on campus. They would always ask me why you have a guide dog, but you don't look blind and I am faking it. This is the one frustrating part of people on campus, as I must educate them every single moment. No, they cannot just stop me when I am walking with my guide dog, as I have places to be. I also have a life and needs to be places and they can't just stop me'.*

It is thus evident to say that these findings confirm Lourens' (2015 :49) statement that direct psycho-emotional disablement arises from relationships that the disabled person has with other people. The students with visual impairments often are questioned about their disability, as they do not seem to be disabled even though they are with a guide dog, and they are accused of faking it to gain concessions during tests and exams. These negative attitudes of people on campus may leave a person with a disability feeling shameful, hurt, awkward, and too despondent to obtain support when needed because they are often questioned regarding their disability.

## 4.7.2 Sub-theme 2.2 Mezzo level: Classroom experiences

In this section the participants mostly viewed their academic experiences in the learning and physical environment on campus. They spoke largely about their experiences in the classroom, about assessments accommodations, and about assistive technology as support which they use to read. The categories that were recognised during the interviews in relation to participants at mezzo level are presented under Categories (a), (b) and (c) below.

### *4.7.2.1  Category (a): assessment accommodations*

The majority of the participants indicated that they make use of assessment accommodations to support them to be academically successful. Participants also reported being able to use a computer with assistive technology during tests and examinations or

making use of a scribe as alternative forms of assessment. This was outlined in the following narratives:

Participant C stated:

> *'I use JAWS software on computer to access my reading material, to study and write exams. I also prefer a Braille format question paper for subjects, for example languages as JAWS can only reads English during tests and exams.'*

It is thus evident to say that these findings confirm the statements of Lourens (2015:109), and Swart and Greyling (2011:102), that universities need to respond to the diverse needs of students with disabilities and thus to provide a spectrum of accommodation and support services. As described in Chapter Three, the support and alternative arrangements referred to include the scanning of textbooks and notes in electronic format to make it easier for visually impaired students to access written material. The software, JAWS for Windows, makes it possible for blind students to work on computers, to read electronic books and to browse the Internet. Similarly, students with partial sight use the programme, Zoom Text, to magnify any electronic information on a computer. Swart and Greyling (2011:102) also emphasise that concessions would include lecturers emailing notes and PowerPoint presentations after lectures, designated seating arrangements in classrooms and providing extra writing time for assessments. During tests and examinations enlarged question papers and papers in Braille format could be available for students who are Braille users. Hence, the above clearly indicates that the students with visual impairment do need a spectrum of accommodations and support services, and that they feel grateful that the services are available for them to be academically successful. This confirms the findings of Crous (2004), FOTIM (2011), and Lourens (2015).

### 4.7.2.2   Category (b): lecturers' attitudes

In the study, the majority of participants felt comfortable commenting on their lecturers' attitudes towards students with visual impairments. This was outlined in the following narrative:

Participant L stated:

> *'My academic life is positive but doing lab work in the Science Faculty can be very problematic with a visual impairment as I cannot see the fine millimetres. I also receive assessment accommodations, for example, extra writing time during tests and examinations and enlarge font of question papers, but when I email my lecturers*

> *to inform them, I do not always receive a very positive response in the "calmest way".*
> *It let me feel that I am a burden to request my accommodations'.*

The narrative above clearly indicates that students with visual impairments do experience negative attitudes from lecturers. According to Ndeya-Ndereya and van Jaarsveldt (2015), beyond legislation and institutional policies relating to students with disabilities at South African universities, lecturers should accept responsibility for and understand accessibility and the establishment of an inclusive learning environment. Therefore, a collaborative effort amongst the stakeholders, for example, the lecturers, support services and students, is required to enhance inclusivity at an institution. Furthermore, it confirms what Matshedisho (2010), Swart and Greyling (2011), Lourens (2015), and Lyner-Cleophas (2016) have to say. Where lecturers seemed unhelpful, students often relate it to the lecturer's lack of awareness regarding disability rather than to a pure unwillingness to help them.

### 4.7.3 Sub-theme 2.3 Macro level: Policy awareness

What follows is a presentation of the categories of participants' policy awareness at macro level on campus. This is offered in Categories (a), (b) and (c) below.

#### *4.7.3.1 Category (a): involvement in policy consultation*

The majority of participants indicated that they were not involved in the policy consultation process and therefore were not certain what the policy entailed. Only one (1) participant indicated involvement in the policy implementation of students with disabilities.

In March 2018, the University Council approved the current Disability Access Policy (2018). The Disability Access Policy (2018) states that 'the aim of the policy is to outline the principles and provisions that would guide the University on the path to becoming a universally accessible university for staff, visitors and students with disabilities. This implies striving towards disability inclusion regarding physical spaces and information in accessible forms'. During the revision and implementation of the policy, students as well as staff with disabilities were consulted to sensitise them regarding the importance of the new policy and why it is needed. This is still being undertaken by the university office which renders services to students with disabilities on an ongoing basis. This was outlined in the following narrative:

Participant B stated:

> *'As I was an active member of the student society for students with disabilities, I was*
> *involved in policy consultations when the policy was renewed to the Disability Access*

*Policy. I am aware of the services of the university office who renders services to students with disabilities, and gave my input when asked, as I make use of their service on regular basis a student with a visual impairment'.*

The narrative above clearly indicates that the students with visual impairments do have a voice and that their input is valued when policy revisions are done. However, more input is needed from students with disabilities. According to Howell (2006), the lack of participation by persons with disabilities in the decision-making process and structures within an institution has further marginalised these issues from debate and discussion in institutional planning and resources allocation (Howell & Lazarus, 2003). Disability issues need to be on the transformation agenda and should not just be an add-on after institutional planning and implementation. According to Lyner-Cleophas (2016), inclusion is fostered on campus when students want to be more involved in decision-making processes regarding support, giving life to the slogan used in the disability world of 'Nothing about us without us'. However, the institution needs to welcome input from representatives of students with disabilities, for students to become more involved.

### 4.7.3.2   Category (b): inclusive education, universal access and design

In the study, the majority of participants reflected that they were not sure what inclusive education and universal access and design was. According to Lourens et al (2019), Mutanga (2018), Lyner-Cleophas (2016), and Matshedisho (2007), the South African government put numerous policies in place for the inclusion of students with disabilities. However, there were still many students with disabilities who could not access universities. This was outlined in the following narrative:

Participant B stated:

*'I feel there is a need for more awareness raising on campus and educating people, for example, staff members on disability issues on campus. If I could, I would have an accessibility or universal access and design module in each faculty. Everyone should have a basic understanding of disabilities as not all visual impairment is the same'.*

The narrative above clearly indicates that there needs to be more awareness raising regarding the needs of students with visual impairments on campus. Lyner-Cleophas (2016) states that ongoing talks regarding student support are held with individual staff in faculties

on an ad hoc basis, but that these need to be developed into formalised and tailor-made courses with faculties taking into account their specific needs.

### *4.7.3.3  Category (c): participation in official student societies*

In the study, the majority of participants indicated that they were part of an official student society on campus. This was outlined in the following narrative:

Participant D stated:

> *'As a person who is blind, I am very active socially by playing Goal Ball and being part of the university's para sport for persons with disabilities. I am also a member of the student society for students with disabilities and was a committee member as well. For me, this is socialising on a different level, making new friends as we support each other, as we share common experiences on campus'.*

The narrative above clearly indicates that the students with visual impairments do have a voice and that their input is valued when policy revisions are done. According to Swarts and Greyling (2011), and Lyner-Cleophas (2016), when there is string advocacy on campus around students with disabilities, this leads to a sense of belonging. The society for students with disabilities exists on campus as an organisation that fosters the social sense of belonging of students with disabilities at the university. The society for students with disabilities on campus also plays an advocacy and lobbying role regarding disability issues on campus, As Swart and Greyling (2011) assert, it is important for students with disabilities to express their experiences and needs instead of becoming the recipients of services planned by others merely assuming what they need.

## 4.8  THEME 3: SUPPORT AVAILABLE AT THE SELECTED UNIVERSITY

In this subdivision, the experiences of visually impaired undergraduate students will be presented. Sub-themes and categories identified from the data are presented in accordance with the participants' responses. The sub-themes identified will also be associated with the micro-, mezzo- and macro levels of the ecological systems perspective. Categories are designed according to participants' reponses and will be discussed below.

## 4.8.1 Sub-theme 3.1 Micro level: Individual knowledge on support structures

What follows is a presentation of the categories of participants in terms of their social participation experiences at micro level on campus. This is offered in the context of Categories (a) and (b) below.

### *4.8.1.1 Category (a): lack of knowledge about available support*

In the study, the majority of the participants indicated that they were not aware of the support available for students with visual impairments on campus. According to Lyner-Cleophas (2016:216), despite information forthcoming in the welcoming week programme of the university and the information on the university's website, students were still unsure of the kind of support available on campus and where they could go for support. This was outlined in the following narrative:

Participant A stated:

> *'I do not know about the services which the university's office who render services to students with disabilities has to offer, as my parents communicated with them to gain information on how to apply for concessions such as enlarge font and extra writing time and done the application for me.'.*

The narrative above clearly indicates that visually impaired students do have a need to gain more knowledge about the support services on campus, as confirmed by the findings of Lyner-Cleophas (2016). It also clearly states in the narrative that, although the visually impaired students are informed about the services their parents are the ones to make contact and gain the information regarding the services and support for their children.

### *4.8.1.2 Category (b): willingness to access support*

In the study, the majority of participants indicated that they were not willing to access support, as their parents did it on behalf of them because they were feeling not comfortable in disclosing their visual impairment to lecturers in order to access support. Lyner-Cleophas (2016:217) states that it seems that some students do not want to draw attention to themselves, which prevents them from seeking the necessary support. Psychological issues around disability identity or the developmental stage of the students could have presented micro factors within the student that prevented them from seeking help. This was outlined in the following narrative:

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Participant I stated:

*'I made use of the university's unit for therapeutic services and my psychologist referred me to the university's office who render services to students with disabilities. Before that in my first year I did not make use their services, as I did not feel comfortable that others know about my visual impairment'.*

The narrative above clearly indicates that some of the visually impaired students are not willing to access support but with the encouragement of support staff and more knowledge of the services they do eventually access support to do well academically. This confirms the findings of Lyner-Cleophas (2016).

### 4.8.2 Sub-theme 3.2 Mezzo level: Awareness of services

What follows is a presentation of the categories of participants in terms of their awareness of services at mezzo level on campus. This is offered in the context of Categories (a), (b) and (c) below.

### 4.8.2.1 *Category (a): university's office which renders services to students with disabilities*

In the study, the majority of participants indicated that they make use of the university's office which renders services to students with disabilities, as their parents made contact; however, they were not aware of all the services rendered by the office. A minority of participants indicated that they do not make use of the services, as they are also not aware of the services rendered by the office. Mutanga (2018:145) argues that the importance of disability units in the lives of students with disabilities cannot be denied. However, caution is needed to avoid stereotyping students with disabilities and alienating them from the rest of the student population. This was outlined in the following narrative:

Participant B stated:

*'As I could not see on the board in class or the PowerPoint presentations, the university office who rendered services to students with disabilities assisted me with a transformer to see on the class board. I was also assisted with a technology bursary to obtain a laptop with Zoom Text software. This made my life easier as I can work at my flat as well and do not have to walk late at night from the assistive technology room where all the computers with assistive technology are'.*

The following narrative emphasises the importance of the services of the university's office which render services to students with disabilities:

Participant J stated:

> *'When I was a prospective student, the university's office who render services to students with disabilities, assisted me in obtaining closer residence placement to my faculty. Due to my visual impairment, I cannot drive or get my driver's licence. I also cannot walk far distances as I cannot see the cars on the roads. During my first year they also assisted me with academic support as well as extra writing time and enlarge font for tests and exams assessments for the duration of my studies'.*

The narrative above clearly indicates that students with visual impairments do need the services of the university's office which render services to students with disabilities, to facilitate access and encourage faculties to be understanding and helpful, so that they feel accepted and part of the university culture. As emphasised by Lourens (2015), university disability offices do advocate for support to students with disabilities and assist them with day-to-day challenges on campus.

## 4.8.2.2 *Category (b): university's office which renders specialised services to students with visual impairments*

The majority of participants indicated that they make use of the university's office which renders specialised services to visually impaired students, as they and their parents were introduced to the service in their first year during the welcoming session of students with disabilities, while a minority of participants indicated that they do not make use of the services. This was outlined in the following narrative:

Participant D stated:

> *'As I am legally blind, I use JAWS software (JAWS for Windows) for all my tests and examinations and all my study material are converted in an electronic format so that I can read it on computer with assistive technology. Without this assistive technology support, for example, JAWS software I will not be able to be academically successful. The university's office who renders specialised services to students with visual impairments provide me with the services'.*

The narrative above clearly indicates that students with visual impairments need assessment accommodations for achievement on the academic terrain, as stated by Mullins and Preyde (2013). These accommodations included adjustments to printed

information/course material, PowerPoints, teaching methods and assessment techniques. Moreover, the university's office which renders specialised services to students with visual impairments, would provide all visually impaired students with electronic course material and books in the accessible format in which they would need it. A student who is blind would also receive course material in Braille format, if needed. All visually impaired students would make use of concessions such as extra writing time during tests and examinations and will also receive the question paper in an accessible format. Hence, the above clearly indicates that students with visual impairments need the university's office which renders specialised services to students with visual impairments, services to access learning material in order to perform well academically. This confirms the findings of Lourens (2015).

### *4.8.2.3  Category (c): faculty support*

In the study, the majority of participants indicated that they receive support in their faculty. The participants mostly indicated that they receive academic support, for example, tutor support or subject-related support in subjects like mathematics, and more disability-related academic support in the faculty. This was outlined in the following narrative:

Participant O stated:

> *'The university office who rendered services to students with disabilities assisted me with residence placement and liaised with my faculty upon application in relation to my needs. I have felt very accepted by the university space and community'.*

The narrative above clearly indicates that some of the visually impaired students need faculty support to perform well academically. These findings confirm those of Lourens (2015) and Lyner-Cleophas (2016) below. According to Lourens (2015), apart from technical assistance, staff of the office which renders services to students with disabilities play a mediating role as they have to communicate the needs of disabled students to faculties. Lyner-Cleophas (2016:221) states that, to have a staff member as faculty coordinator presupposes insight into the teaching and learning dynamic within faculties, and thus an understanding of the kinds of support required by peers.

### 4.8.3 Sub-theme 3.3 Macro level: Physical environment support

What follows is a presentation of the categories of participants' challenges on macro level. This is offered in the context of Categories (a) (b) and (c) below.

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### 4.8.3.1 Category (a): mobility orientation/training on campus

In the study, the majority of participants indicated that they did not make use of mobility orientation training as they did not know that the services existed. Only one (1) participant reflected on making use of mobility orientation training on campus in its first year upon arrival and that it was very useful and necessary as campus was a new and unfamiliar environment. This was outlined in the following narrative:

Participant C stated:

> *'I had mobility orientation training on campus as I was new and did not know the campus. I also make use of a cane and prefer not to have a guide dog. I found it extremely helpful and would advise it to all future visually impaired students who are totally blind'.*

The narrative above clearly indicates that visually impaired students do need mobility orientation training on campus, and that it needs to be introduced to more students who are blind. This confirms the findings of McBroom (1997), Vancil (1997) and Hopkins (2011), who all argued that access to mobility orientation for visually impaired students is of the utmost importance, as they need mobility orientation on campus to learn the accessible routes to class and back to their residences. They also need to learn the routes to all the support services on campus, for example, the student health services, the disability unit, the bursaries and loans division, and where all the shops and banks are.

### 4.8.3.2 Category (b): facilities management support: lifts, tactile paving and strips for stairs, signage

In the study, the majority of participants indicated that they need the sidewalks to be accessible with strips to stairs, clear signage and tactile paving on sidewalks to guide the way to walk for persons who are blind. The lifts also need to have Braille and to be voice activated. This was outlined in the following narrative:

Participant J stated:

> *'When walking to class I do not have any issues as I stay near the faculty and only cross on pedestrian crossing, but earlier in the year while going to the mall a car bumped me as I did not see it while crossing the road'.*

The narrative above clearly indicates that some of the students with visual impairments do experience physical challenges on the sidewalks when walking to class or on campus.

These statements confirm the findings of Lourens (2015), and Lyner-Cleophas (2016). Lourens (2015) indicates that there are also other physical challenges in the environment for visually impaired students, for example, the physical layout of the universities are non-inclusive. Buzzers at traffic crossings would help not only students with visual impairments, but also people who could not see well at night, those with colour blindness and students with attention deficit disorder. According to Lyner-Cleophas (2016:222), there is insufficient campus-wide collaboration in addressing the inaccessible environment and buildings on campus. Faculties felt that the university's office which renders services to students with disabilities needed to do more in addressing the inaccessible environment. Yet, the university's office which renders services to students with disabilities felt that they do refer urgent matters to the Facilities Management division which is mandated by the university to address all physical access challenges experience by students and staff.

### 4.8.3.3 Category (c): funding access

In the study, the majority of participants indicated that they make use of financial assistance (a bursary) to cover their studies financially as well as the very expensive assistive technology which they used to be able to study. This was outlined in the following narrative:

Participant L stated:

> *'The university office who renders services to students with disabilities, assisted me with a bursary to cover my study fees, accommodation, food allowance and assistive technology (laptop and Zoom software) as it assisted my parents a lot as my medical expenses per year is very high'.*

According to Lyner-Cleophas (2016:213), financial support for students with disabilities needs to be more publicised. Students are not always aware of financial support available specific to the support of students with disabilities. The participants mainly receive financial support from the First Rand Foundation and from the National Student Financial Aid Scheme (NSFAS), but they did not know that there is a NSFAS bursary specifically for students with disabilities. Hence, the above narrative clearly indicates that visually impaired students do need more information and assistance with the process to apply for the NSFAS bursary for students with disabilities as it does cover assistive devices, for example laptops with assistive technology, which are very expensive. They also cover assistance with the care of the guide dog, for example, veterinary costs and dog food, since a guide dog is seen as an

assistive device to support a visually impaired student on campus. This confirms the findings of Lyner-Cleophas (2016)**.**

### 4.8.3.4 Category (d): other support

In the study, the majority of participants indicated that they need other support, for example tutor support, assistive technology, support in laboratories doing measurements, accommodations, for example, extra writing time and enlarged font of question papers, and mainly, an accessible shuttle service to class during the winter months when it rains. This was outlined in the following narrative:

Participant B stated:

> *'I feel that for winter months students with disabilities needs an accessible shuttle service to go to class. A bigger shuttle to make space for all the guide dogs on campus, as they cannot walk in the rain, as it is hard to concentrate in the rain. You also cannot walk with a guide dog and an umbrella when the rain is pouring. An accessible shuttle for all students with disabilities would be helpful especially during winter months'.*

It is thus evident that this statement confirms the findings of Mutanga (2017). According to Howell (2006), Lourens (2015), Lyner-Cleophas (2016), and Mutanga (2017:6), institutional actions at university level involve having to choose from two equally problematic solutions to provide equitably for students with disabilities. As Mutanga (2017:6) states, universities need to identify the needs of students with disabilities and to provide according to their needs, for example, a university bus to take students with disabilities shopping because local taxis will not transport them (if they have a guide dog) or will charge double if they travel with a wheelchair. Mutanga (2017:6) also recommends a universally accessible transport system for all students.

## 4.9 CONCLUSION

In concluding the empirical chapter of the study, the researcher presented the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments in terms of themes, sub-themes, categories and narratives by the participants. Even though the study experienced challenges in collecting more in-depth insights from the participants regarding their knowledge of policy awareness, the narratives selected in this

chapter represent the most articulate discourses. Much of the findings were related more to the actual experiences of the participants. The chapter that follows will offer integrated conclusions based on the key findings, followed by recommendations for universities to address the needs of visually impaired students.

# CHAPTER FIVE

# CONCLUSIONS AND RECOMMENDATIONS OF THE RESEARCH

## 5.1 INTRODUCTION

The aim of the study reported in this thesis was to gain more insight of the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments in higher education. This study has been one of a few attempts to report thoroughly on the experiences of undergraduate students by utilising the ecological perspective as a theoretical framework. This chapter aims to provide an integrated conclusion and recommendations for logistical, teaching and learning challenges experienced by undergraduate students with visual impairments through the lens of the ecological systems perspective. By providing the conclusions and recommendations for the challenges faced, the aim is also to provide recommendations to improve policies and support care services rendered to undergraduate students with visual impairments. Much literature has been accessed on the challenges which visually impaired students face. This literature mainly focused on the challenges of visually impaired students in higher education setting in a South African context.

## 5.2 CONCLUSION

This section contains the conclusions that can be drawn based on the empirical investigation reported on in this thesis, as presented in the previous chapter. The conclusions are offered within the context of the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments in higher education. Below, conclusions are presented according to the following themes:

- Logistical, teaching and learning challenges;
- Experiences of visually impaired students; and
- Support services available in higher education, at a selected university.

### 5.2.1 Logistical, teaching and learning challenges

Based on the literature review provided in Chapters Two and Three, and the experiences of visually impaired undergraduate students who participated in the study (as reported in the

previous chapter), it is evident that visually impaired students do experiences logistical, teaching and learning challenges at university level. These challenges include logistical challenges, technological challenges, and transportation challenges at university.

- Micro level: Logistical challenges

According to the experiences of visually impaired undergraduate students, logistical challenges occur when visually impaired students are unable to read signage on notice boards when they are on their way to class. In addition, students with visual impairments do experience difficulties in class when they are unable to see lecturers' notes displayed on a PowerPoint projection or chalk board. Logistical challenges also include students with visual impairment challenges, who experience limited accessibility to entrances of buildings when going to class. They experience difficulties when accessing buildings by using inaccessible stairs and limited tactile paving on sidewalks, which makes the sidewalks inaccessible routes when going to class.

- Mezzo level: Technological challenges

According to the experiences of visually impaired undergraduate students, they do experience technological challenges when using computers with assistive technology as they struggle to access their lecturers' notes and study material on the online learning management system and when navigating various websites for educational purposes. The students with visual impairments explained that, for them to be able to read all their study and reading material, they need to be in a soft copy and accessible format for them to be able to read it on a computer with their assistive technology, such as JAWS software or Zoom Text software to enlarge the font. This can be challenging for students with visual impairments as they need to wait up to 14 days for reading and study material to come back to them, to be able to start an assignment or to study for a test or examination. University offices which assist visually impaired students, could be under resourced and have few staff to cater to the needs of students with visual impairments. This could impact negatively on the academic performance of visually impaired students. During online assessments students with visual impairments do experience challenges in being able to do their assessments. As they indicated in the study, for a partially sighted student who is not completely blind, during online assessments the student needs an enlarged question paper or to complete it on computer with Zoom Text assistive technology. A legally blind student, when writing tests and examinations, needs the question paper in an electronic format/ soft copy, which is accessible to read with assistive technology, for example JAWS software. If

JAWS software is not able to read the foreign language, alternative options need to be explored, such as providing the examination paper in Braille or giving the student the option to do an oral examination, where a scribe would write the answers. All students with visual impairments receive reasonable accommodation, such as test and examination concessions, the use of a computer during tests and exams with assistive technology, enlarged font- or Braille questionnaires to eliminate the online assessment challenges which they face when doing an assessment. These conclusions emphasise the importance of the university's office which renders services to the students with visual impairments, since the support staff advocates for the students with visual impairments and assist with the implementation of these reasonable accommodations (test and examination concessions) during online assessments at the university.

- Macro level: Transportation challenges

The majority of students with visual impairments indicated that they have the need for an accessible shuttle service that caters to the needs of all students with disabilities. One of the major concerns is that during winter months it is challenging for students with visual impairments to walk to class in the rain with a guide dog, as the guide dog cannot see clearly during the rain. Students with visual impairments also cannot walk in the rain and manage an umbrella and the guide dog. These difficulties are also similar to those of students who are wheelchair users as they cannot wheel a wheelchair and handle an umbrella in the rain. Students with visual impairments indicated that they experience safety issues at night when they want to work in the library or participate in a social event after hours. There is therefore a need for an accessible shuttle service that operates after hours as well. Students with visual impairments cannot walk alone at night owing to its being unsafe. Policy implementation was a challenge, as the Disability Access Policy (2018) is fairly new and not all students with visual impairments have knowledge of it. However, the students with visual impairments indicated that the university environment, staff, and students need more sensitisation and training on the new policy. Therefore, as the university environment becomes knowledgeable regarding disability and the policy, it could influence the university management to implement a universally accessible transportation service for all students.

## 5.2.2 EXPERIENCES OF STUDENTS WITH VISUAL IMPAIRMENTS

This section focuses on the experiences of students with visual impairments in higher education at a selected university. The students with visual impairments identified

challenging experiences during social participation, classroom experiences, as well as with their policy awareness at the university.

- Micro level: Social participation

As indicated in the study, students with visual impairments do socialise with other students, but they prefer to link and interact with other students with disabilities. As peers they share some of the same experiences and would give each other support and advice when needed. Students with disabilities regard the practical and emotional support of peers to be very important and they are considered to be valuable resources for information about services, advocacy, and support. The students with visual impairments indicated that they do experience challenges when they want to participate in residence activities owing to their visual impairments. They would like to participate in sporting events such as table tennis, but find it challenging as they cannot see the ball owing to their visual impairments. Students with visual impairments find it difficult to participate in social activities at residence and find it difficult to find someone who shares their interests as the activities are mostly inaccessible socialising activities like watching rugby matches. The students with visual impairments indicated that they do experience factors which hinder social participation such as participating after hours at events. Owing to their visual impairments, the students do not have driver's licences to drive a car. The university shuttle service does not drive after hours or on all the routes on campus, and it is also inaccessible to use as it is not big enough for the students with visual impairments guide dogs. As the students are bursary holders, they do not have the financial means to spend money on taxies or to Uber to social events on campus. The students with visual impairments also indicated that they do experience personal challenges at university owing to their visual impairment. Challenges such as experiencing people with negative attitudes on campus, and insensitive questions such as, 'You do not look blind, why do you have a guide dog?' These social encounters may leave students with visual impairments feeling shameful, hurt, and awkward.

- Mezzo level: Classroom experiences

The participants illustrated that they do experience challenges and need reasonable accommodations when writing assessments, such as extra writing time during tests and examinations, enlarged font of question papers to be able to read it, as well as the use of computers during tests and examinations with assistive technology to be able to do the assessments required to perform well academically. These assessment accommodations are needed to support students with visual impairments to be able to read the question

papers during assessments. Concessions such as extra writing time are needed for when a legally blind student who uses Braille, needs to read the Braille question paper as it can become a very lengthy question paper, so more time is also needed to do the answers on a computer with assistive technology, such as JAWS software. The students with visual impairments felt comfortable to comment on their lecturers' attitudes. They indicated that they do not want to be a burden to lecturers when they inform them of their visual impairments and of reasonable accommodations which they receive. It is seen more as the lecturers' lack of awareness regarding their disability than pure unwillingness to help them.

- Macro level: Policy awareness

The majority of the participants illustrated that they were not involved in policy consultations, although one student was involved in the consultation process when the university disability policy was changed to a Disability Access Policy. The aim of the Disability Access Policy is to outline the principles and provisions that guide the university to becoming a universally accessible to students, staff and visitors with disabilities. A need for training on the policy was also indicated by the students with visual impairments. The students with visual impairments illustrated that there is a need for sensitisation sessions on disability as well as information sessions on issues such as inclusive education, universal access and design as their knowledge was very limited. The students with visual impairments illustrated that they do participate in official student societies and as a few of them were committee members on the student society for students with disabilities where they do a lot of advocacy and lobbying for students with disabilities.

## 5.2.3 Support available at the selected university

This theme focused on the support available at the selected university, gaining input about whether the students with visual impairments are aware and have knowledge of the services provided by the university to students with disabilities on campus. The theme focused on individual knowledge on support structures, the awareness of services by students with visual impairments, and the physical environment supports available to students with disabilities.

- Micro level: Individual knowledge on support structures

The participants illustrated that they had not been aware of the support available for students with visual impairments on campus, but they do make use of the services as their parents reached out to the university to seek support for their children. Despite information

forthcoming in the welcoming week programme of the university and the information on the university's website, students were still unsure of the kind of support available on campus and where they could go for support. The majority of participants indicated that they were not willing to access support, as their parents did it on their behalf because they are not comfortable to disclose their visual impairment to lecturers in order to access support. Students with visual impairments also indicated that they were referred by other support structures in the university, but one first-year student did not want anyone to know that he had a visual impairment.

- Mezzo level: Awareness of services

The students with visual impairments illustrated that although they make use of the services at the university, they are not aware of all the services available. Their parents contacted the office in the year when they were prospective students, and during the university's welcome session for students with disabilities. They also indicated that they were introduced to the specialised services for students with visual impairments at the welcome session. In the narratives in Chapter Four it clearly indicates that students with visual impairments need the university office which specialises in support to visually impaired students, to access learning material in order to perform well academically. The students with visual impairments do make use of faculty support and they truly benefit from it.

- Macro level: Physical environment support

The students with visual impairments indicated that mobility orientation on campus is a real need especially when they are new to the environment. It is extremely helpful as students with visually impairments can get lost, which contributes to issues of safety. Mobility orientation on campus to learn the accessible routes to class and back, to the residence and the surrounding areas such as the shops and library and student centre is very useful to students with visual impairments. The students with visual impairments indicated that they need the physical environment to be accessible to walk to class or on campus. They indicated that tactile paving on the sidewalks and strips on the stairs to indicate where the stairs begin and stop as well as signage provided by the university facilities' management are of the utmost importance for them to navigate safely around campus. It was also illustrated by the participants that access to funding (bursaries) for studies is needed as assistive technology is very expensive to buy. Participants also indicated that other support is needed such as in laboratories doing measurements as it is a challenge for them to do accurate measurements, owing to their visual impairments.

## 5.3 INTEGRATED CONCLUSIONS

The following are the integrated conclusions that can be drawn from the three themes, in relation to the logistical, teaching and learning challenges in higher education in a South African context.

- The study indicated that students with visual impairments do have a fair understanding of how to access support structures at university.

- Additionally, this study reported that students with visual impairments tend to experience logistical challenges in the classroom, such as being unable to see lecturers' notes and PowerPoint displays or what is written chalkboard in class.

- Using assistive technology in class helps students with visual impairments to be able to see on the board and to participate in class like other non-disabled students.

- Students with visual impairments do find some of the routes inaccessible, which makes it difficult for them to go to class as they can get lost, which contributes to issues of safety.

- It has been noted from the study that students with visual impairments do experience technological challenges and that they need to use computers with assistive technology as support to be able to read all reading material books and learning materials in an accessible format.

- In addition, it was noted that students with visual impairments do experience assessment challenges when writing tests and examinations, but by using assistive technology on computers they are supported students to be able to do the assessments required to pass the degree.

- This study also confirmed that students with visual impairments do participate less in social activities owing to various reasons owing to a lack of accessible shuttle services after hours when most out of class activities occur.

- It was also noted that in residences, a few sports activities are not accessible for students with visual impairments. They feel excluded and isolated, as they cannot see the ball to participate owing to their visual impairments.

- Overall, this study provides a contribution to the university at large, and especially to faculties as well as to the support structures which provide a service to students with visual impairments.

- As noted in the study, students with visual impairments are generally satisfied with the services that they experience. It is envisaged that the findings will be of

importance regarding visually impaired students who are facing logistical, teaching, and learning challenges.

- It could be a guide to the university to improve and expand upon the existing support to visually impaired students, especially in the online reality which we faced currently.

- It is imperative that the university academic and support staff must consider all students, meaning support to visually impaired students as well when planning the teaching, learning and assessments curricular to be inclusive to all students.

- Furthermore, a large portion of the disabled student population is already reliant on assistive technologies to access teaching, learning and assessment material.

- Moving forward, the university needs to consider Universal Design (UD) and Universal Design for Learning (UDL), as well as blended learning and MOOCs as ways to engage a diverse group of students.

## 5.4  CONCLUSIONS ON THE ATTAINMENT OF THE OBJECTIVES OF THE STUDY

The study focused on gaining an in-depth understanding of the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments in higher education.

The study had the following objectives:

- To discuss critically the nature and consequences of visual impairment for undergraduate students within the context of the ecological perspective. This objective was achieved in Chapter Two of the thesis, where a detailed discussion was provided of (1) the theoretical underpinning of the study, namely the ecological systems perspective, and (2) the nature and consequences of visual impairment as a challenge experienced by persons with disabilities, focusing on undergraduate students with visual impairments through the lens of the ecological systems perspective, at the different levels of intervention in social work, namely micro-, mezzo- and macro levels.

- To contextualise the challenges faced by students with visual impairments, students with a disability in higher education and training in a South African context. This objective was achieved in Chapter Three of the study, where an overview was provided of the historical and current policies and legislation that protect students with

disabilities as well as the statistical findings regarding disabilities in higher education in a South African context.

- To investigate empirically the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments. Chapter Four reflects on the achievement of this objective. The findings were presented of 15 students with visual impairments. Narratives were extrapolated, analysed, and discussed in the form of themes, sub-themes, and categories. The themes were matched to sub-themes, categories, and participants' narratives, and analysed in relation to the ecological systems perspective.

- To draw conclusions and present recommendations on the logistical, teaching and learning challenges experienced by undergraduate students with visual impairments in higher education and training in a South African context. In the first part of this chapter, specific conclusions were presented, and next, the recommendations will be presented.

## 5.5  RECOMMENDATIONS

Three sets of recommendations are made below, based on the study's findings. First, some recommendations are directed at university offices which render services to students with visual impairments, and to social workers, or disability support practitioners, to improve the service rendering by social workers, or disability support practitioners and the universities where they are employed. Second, recommendations are made to educational institutions in higher education and training, and finally, recommendations are made for further research, while the strengths and limitations of the research are also listed.

## 5.5.1 Recommendations to university offices which render services to students with visual impairments

- The participants, although being visually impaired, handled the interview sessions remarkably well and expressed a need for more knowledge updates regarding the Disability Unit services, as well as other support structures on campus.

- It was recommended that there need to be more awareness raising sessions on services available, especially information on how to apply for assessment concessions, for example, extra writing time, enlarged font as well as assistive technology support.

- The participants also recommended a few strategies for students to become aware of the of the services as there were four (4) out of the 15 participants who were not aware of the services.

- As information does exist, but is hidden, participants made a recommendation that the universal disability icon, which is the wheelchair sign, needs to be placed on the Stellenbosch University website for information on disability services and accessibility features to be more prominent.

- Another recommendation was that more prominent notice boards, or interactive boards should be placed on campus to indicate where the Disability Unit is, and that there should be accessible routes for visually impaired students.

- To create talk shows for peers, where students with visual impairments who are comfortable speaking about their experiences, since peers do learn from others in the same situation.

- There should be more awareness raising and sensitisation about the Disability Access Policy (2018), for all students and staff; however, more prominent sessions are needed for students with disabilities as they do not know concepts such as inclusion, universal design and learning, or universal access. Participants experienced inclusion, through their lived experiences; however, they struggle to verbalise it when asked to explain.

- Participants also recommended that information regarding services should be available in faculty newsletters.

- Another recommendation was to invite students of all year groups to an information sharing open day at the Disability Unit to inform students of available support services and especially about different kinds of assistive technology available to support them during their studies.

- Participants recommended reaching more students with visual impairments during welcome week, for the Disability Unit staff to attend the welcome session, and the Vice-Rector's speech, as a visible presence for them to contact afterwards.

- Participants recommended that to assist with adjusting to the new environment, all students with visual impairments need a mentor or study buddy to guide them during their first year. These services must be available for Private Student Organisation (PSO) students as well, as not all visually impaired students stay in a university residence, where they can benefit greatly from the mentor.

- Participants recommended that it is imperative for visually impaired students to disclose their disabilities and needs to the university, to ensure a smoother adjustment to campus life, as some of the services entail specialised support. One of the participants recommended, from their own experience of completing the disability support form, that the Disability Unit should contact the prospective student with a visual impairment plan and recommended services that would make it easier for the student with a visual impairment to adjust to the new environment.

## 5.5.2 Recommendations to educational institutions in higher education and training

- It was recommended that the university management needs to prioritise a permanently allocated budget for mobility orientation training services as it is specialised services and provided by external service providers as the university does not have the service internally. These services are essential to the adjustment of visually impaired students on campus to be able navigate their way to class and back to residence, and to walk around to other essential places, for example the library and the student centre on campus.
- The participants recommended more communication with regard to alerts about road works on campus and where the municipality or Facilities Management is busy with construction work, since they cannot see open holes in the ground or cars parked on the sidewalk.
- The participants acknowledge that the Disability Unit and *Dis Maties* sends them WhatsApp messages and email alerts; however, a Stellenbosch University communication platform or app was suggested with more frequent real time communication alerts from Facilities Management as they know the areas and sites which need to be avoided and can suggest alternative accessible routes to use to attend class.
- Participants recommended training on how to use the assistive technology in the new assistive technology room (the old Braille room) and in the different libraries on campus, as not all students with visual impairments attended special schools where they obtained that knowledge. As technology improves daily and new advanced assistive technology becomes available, the students need training on their new devices.

- The participants recommended for support services to make training in assistive technology more available as new technology becomes more available, as the technology advances. Participants also recommended a demonstration on new technology which is available at the Disability Unit open day, for students with visual impairments to be able to improve their ability to use better learning material.

- Stellenbosch University Management should invest more funds in students with disabilities, especially in the upgrading and improvement of assistive technology for visually impaired students as this equipment is very expensive and not all students can afford it.

- Recommendations were made by the participants for support services at the university to investigate the need for an accessible shuttle services for all students with disabilities, as students with visually impairments need this service daily.

- The participants recommended that the university management needs to develop and finance a more accessible transportation system for all students, especially catering for the needs of students with visual impairments as they are most vulnerable and experience challenges getting to class especially on rainy days, as guide dogs cannot concentrate in the rain. Not being able to attend class will increase their anxiety levels and could impact their academic performance negatively.

- Participants recommended that academic and support staff be trained regarding the Disability Access Policy. Academic staff needs to be trained about how to deal with visually impaired students in class and should know why it is important for a lecturer to liaise with the support structures, especially the Disability Unit and Disability Resource Office, when providing support to a visually impaired student.

- Another recommendation was that the Disability Unit staff become specialists in conducting training sessions for other staff on visual impairment and that it becomes mandatory training for all staff, sensitising them about disability and in dealing with visually impaired students in their lecture venues.

## 5.6 RECOMMENDATIONS FOR FURTHER RESEARCH AND STRENGTHS OF THE RESEARCH

- Further research would be recommended in the field of experiences and challenges of academic and support staff   with visual impairments in the workplace, in a higher education setting.

- Services for staff with visual impairments at Stellenbosch University as their workplace. What policies and support structures are in place for staff with visual impairments?

- Further research would be to explore how academic staff and support staff experience visually impaired students in the faculty. Do they feel that there are enough resources to empower them to cater for the needs of visually impaired students in their faculties?

- A strength of the study was that the voice and experiences of visually impaired students were heard. The disability slogan about ability 'Nothing about us, without us'.

- Another strength of the study was enhancing a transformative student experience for visually impaired students, embedded in the Strategic Institutional Intent 2040.

# REFERENCE LIST

Acera, A., Barrera, R., Galvis, V., Merayo, J., Sherwin. T., & Tello, A. 2015. *Keratoconus: an inflammatory disorder?* Macmillan Publishers, *Eye* (29):843–859. [Online] Available: *www.nature.com/eye*

Ainscow, M., Booth, T., & Dyson, A. 2004.Understanding and developing inclusive practices in schools: A collaborative action research network. *International Journal of Inclusive Education.* 8(2): 125–139. https:// doi.org/10.1080/1360311032000158015

Babbie, E. & Mouton, J. 2001.*The practice of social research*. Cape Town: Oxford University Press.

Babbie, E. & Mouton, J. 2010.*The practice of social research*. Cape Town: Oxford University Press.

Barker, R. 2003. *The social work dictionary.* 5th ed. Washington, DC: NASW Press.

Beauchamp-Pryer, K. 2012.Visual impairment and disability: A dual approach towards equality and inclusion in UK policy and provision. In N. Watson, A. Roulstone & C. Thomas (eds.). *Routledge handbook of disability studies* :177–192. London: Routledge.

Beauchamp-Pryor, K. 2013. *Disabled students in Welsh higher education: A framework for equality and inclusion*. Rotterdam: Sense Publishers.

Bertaux, D. 1981. From the life-history approach to the transformation of sociological practice. In: D. Bertaux (ed.). *Biography and society: The life history approach in the social sciences*. London: SAGE.

Bronfenbrenner, U.1979.*The ecology of human development: experiments by design and nature.* Cambridge, MA: Harvard University Press.

Bronfenbrenner, U.1994. Ecological models of human development. In *International Encyclopaedia of Education*, Vol.3. 2nd ed. Oxford: Elsevier. Reprinted in M. Gauvain. & M. Cole. (eds). 1933. *Reading on the development of children*. 2nd ed. New York: Freeman:37–43.

Bronfenbrenner. U. 2005. Making human beings human. Bio-ecological perspectives on human development. London: SAGE.

Bronfenbrenner, U. & Ceci, S.J.1994. Nature-nurture reconceptualised in developmental perspective: a biological model. *Psychological Review*,101(4): 568–586.

Bronfenbrenner, U. & Evans, C.W. 2000. Development sciences in the 21st century. Emerging questions, theoretical models, research designs and empirical findings. Social Development, 9(1): 115–125. [Online]. Available: http://onlinelibrary.wiley.com. ez.sun.ac.za/. DOI: 10.1111/ 1467-9507.001114/pdf. [2012, February 21].

Bronfenbrenner, U. & Morris, P.A.1998. The ecology of developmental process. In R.M. Lener (ed.). *Handbook of child psychology*. Vol.1: Theoretical models of human development. 5th ed. New York: John Wiley & Sons: 993–1028.

Bronfenbrenner, U. & Morris, P.A. 2006. The bio-ecology model of human development. In R.M. Lener. (ed). *Handbook of child psychology*. Vol.1. Theoretical models of human development.6th ed. New York: John Wiley, 793-828.

Bryman, A. 2012. Social *research methods*.4th ed. Oxford: Oxford University Press.

Butchart, M., Long, J., Brown, M., & McMillan, A. 2017. Autism and visual impairment: A review of the literature. *The Authors*, 4(1): 118–131.[Online]. Available from:

DOI:10.1007/s 40489-016-0101-1/pdf. [2017, January 5].

Census 2011: Profile of Persons with Disabilities in South Africa. 2014. Pretoria: Statistics South Africa.

Chetkow-Yanoov, B. 1997. *Social work practice: A systems approach.* 2nd ed. New York: Haworth Press.

Collins, J. & Hussey, R. 2003.*Business research: A practical guide for undergraduate and postgraduate students.*UK: Palgrave Macmillan.

Congdon, N., Friedman, D., & Lietman, T. 2003.Important causes of visual impairment in the world today. *JAMA,* 290: 2057–2060.

Creswell, J.W. 2003. *Research design: Qualitative, quantitative and mixed-methods approach.* London: SAGE.

Creswell, J.W. 2007. *Qualitative inquiry and research design*: *Choosing among five approaches.* SAGE.

Crous, S.F.M. 2004.The academic support needs of students with impairments at three higher education institutions. *SAJHE*, Vol 18(1): 228–251. Unisa Press

Department of Basic Education (DBE). 2001. *Education White Paper 6. Special needs education: building an inclusive education and training system*. Pretoria: Department of Education.

Department of Higher Education and Training (DHET). 2012. *Green Paper on Post -School Education and Training: briefing; Committee Submission on Department of Higher Education& Training Public Entities.* [Online]. Available: www.dhet.gov.za. [2012, March 07].

Department of Higher Education and Training (DHET). 2013. *White Paper for post-school education and training. Building an expanded, effective and integrated Post-School System***.** [Online]. Available: www.dhet.gov.za. [2013, November 20].

Department of Higher Education and Training (DHET). 2018a. *Statistics on Post-School Education and Training in South Africa*. [Online]. Available: www.dhet.gov.za. [2018, March].

Department of Higher Education and Training (DHET). 2018b. *Strategic Policy Framework on Disability for the Post-School Education and Training System in South Africa*. [Online]. Available: www.dhet.gov.za. [2018, March].

Department of Women, Children & People with Disabilities (DWYPD). 2013. *Discussion document for National Policy Framework to uphold, promote and protect the rights of persons with disabilities*. National Disability Rights Policy. [Online]. Available: DisabilityRights@dwcpd.gov.za

Department of Social Development (DSD). 2015. *White Paper on the Rights of Persons with Disabilities.* [Online]. Available: www.dhet.gov.za. [2015, December 9].

De Vos, A.S., Strydom, H., Fouché, C.B. & Delport, C.S.L. 2011. *Research at grassroots: For the social science and human service professions***.** 4th ed. Pretoria: Van Schaik.

Donald, D., Lazarus, S & Lolwana, P. 1997. *Educational psychology in social context: Challenges of development, social issues and special needs in South Africa*. Cape Town: Oxford University Press.

Du Toit, HP. 2009. Providing and managing student development support in higher education in a developing country. Unpublished thesis, University of Pretoria

Elliott., & Wilson, C. 2008. *The perceptions of students with hidden disabilities of their experience during transition to higher education.* East of England research project. Retrieved from http://www.impact-associates.co.uk/hidden_disabilities.html

Encyclopaedia Britannia. 1973. London. NASW Press. (1) 525. (3)

Erikson, F. 2013. A history of qualitative inquiry in social and educational research. In N. K. Denzin, & Y.S. Lincoln (eds.). *The landscape of qualitative research.* 4th ed. SAGE.

Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM). 2011. *Disability in higher education project report.* Retrieved from http://www.uct.ac.za/ usr/disability/reports/progress_report10_11.pdf

Fuller, M., Healey, M., Bradley, A. & Hall T. 2004. Barriers to learning: a systemic study of the experience of disabled students in one university. *Studies in Higher Education*. 29(3): 303–318.

Gencoz, T., & Or, P. 2006.Associated factors of suicide among university students: Importance of family environment. *Contemporary Family Therapy*, 28(2): 261–268.

DOI: 10.1007/s 10591-006-9003-1

Global definition of social work. 2014. [Online] Available at: http://ifsw.org/police/definition-of-social-work/ [Accessed 2018, 18 February.]

Goode, J. 2007. Managing disability: Early experiences of university students with disabilities. *Disability and Society,* 22(1): 35–48. DOI:10.1080/09687590601056204

Goodley, D.2011. *Disability studies: An interdisciplinary introduction*. London: SAGE.

Greenfields, E.A. 2011.Using ecological frameworks to advance a field of research, practice, and policy on aging-in-place initiatives. *The Gerontologist*.52 (1):1–12.

Greyling, E. 2008. Students with disabilities' experiences of support and barriers to their development at Stellenbosch University. Unpublished thesis. Stellenbosch University, Stellenbosch.

Guest, G., Bunce, A.& Johnson, L.2006. *How many interviews are enough? An experiment with data saturation and variability*. Field methods, 18(1):59-82.

Hakim, C. 2000. *Research design: Successful designs for social and economic research*. London: Routledge.

Hall, T., & Stahl, S. 2006. Using universal design for learning to expand access to higher education. In M. Adams & S. Brown (eds.). *Towards inclusive learning in higher education: Developing curricula for disabled students*:67–79. London: Routledge.

Hancock, B. 1998. *Trent focus for research and development in primary health care: An introduction to qualitative research*. Nottingham: Trent Focus Group.

Hardman, M., Drew, C., & Egan, W. 2005. *Human exceptionality: School, community and family.* Boston: Pearson Education.

Higher Education Disability Services Association (HEDSA). 2009. *Report of the 2009 Disability Survey.*

Higher Education Disability Services Association (HEDSA). 2011. Report of the 2011 Disability Survey.

Heller, K.W., Forney, P.E., Alberto, P.A., Best, S.J., & Schwartzman, M.N. 1996. *Understanding physical sensory and health impairments.* Pacific Grove, CA: Brooks/Cole Publishing.

Henning, E., van Rensburg, W., & Smit, B. 2004. *Finding your way in qualitative research.* Pretoria: Van Schaik.

Hodges, J.S., & Keller, M.J. 1999.Visually impaired students' perceptions of their social integration in college. *Journal of Visual impairment and Blindness*, 93(3): 153–166. [Online] Available at: http://www.afb.org/myafb.aspx

Hopkins, L. 2011. The path of least resistance: A voice-relational analysis of disabled students' experiences of discrimination in English universities. *International Journal of Inclusive Education*, 15(7): 711–727. DOI:10.1080/1360311093317684

Howell, C. & Lazarus, S. 2003.Access and participation for students with disabilities in South African higher education: Challenging accepted truths and recognising new possibilities. *Perspectives in Education*, 21(3):59–74.

Howell, C. 2005. Higher education monitor: South African higher education responses to students with disabilities. Pretoria, South Africa: Council for Higher Education. [Online] Available from: http://www.che.ac.za/.../higher-education-monitor/higher-education-monitor-3.

Howell, C. 2006. Disabled students and higher education in South Africa. In B. Watermeyer, L. Swartz, T. Lorenzo, M. Schneider. & M. Priestley, M. (eds.). *Disability and social change*: *A South African agenda*:164–178. Cape Town: HSRC Press.

Hurst, A. 1993. *Steps towards graduation: Access to higher education for people with disabilities*. Aldershot, UK: Avebury.

Hurst, A. 1996. Reflecting on researching disability and higher education. In L. Barton (ed.). *Disability and society: Emerging issues and insights.* New York: Longman.

Hurst, A. 2009. Curriculum and pedagogy: Challenges and dilemmas for teaching staff. In M. Fuller, J. Georgson, M. Healey, A. Hurst, K. Kelly, S. Riddell, H. Roberts, & E. Weedon, (eds.). *Improving disabled students' learning* London: Routledge:78–96.

International Association of Schools of Social Work, International Council on Social Welfare, & International Federation of Social Workers (IASSW, ICSW & IFSW). 2008. Global agenda for social work and social development. Third report: Promoting community and environmental sustainability. (D.N. Jones (ed.) IFSW Rheinfelden, Switzerland.

International Association of Schools of Social Work, International Council on Social Welfare, & International Federation of Social Workers. 2014. Global agenda for social work and social development. First report 2014: Promoting social and economic equalities. London: SAGE. [Online] Available from: http//www.sagepub.com/

International Federation of Social Workers (IFSW). 2011. Global agenda on social work and social development. [Online] Available from: http://www. lfsw.org/f38000378.html (07/05/17).

Jacklin, A. 2010.To be or not to be 'a disabled student' in higher education: The case of a postgraduate 'non-declaring´ (disabled) student. *Journal of Research in Special Education Needs*, 11(2): 99–106. DOI:10.1111/j.1471-3802.2010. 01157.x

Jacklin, A., Robinson, C., O' Meara, L., & Harris, A. 2006. *Improving the experiences of disabled students in higher education.* University of Sussex, Brighton, UK. [Online] Available from http://www.sussex.ac.uk/ wphegt/resources/bibliographies/disability.

Jacobs, C. 2014.Exploring Identity formation in adolescents who attended a school of skills. Unpublished Master's thesis. University of Stellenbosch, Stellenbosch.

Kilmurray, L., & Faba, N. 2005.*Access to academic materials for post-secondary students with print disabilities*: Report for the National Educational Association of Disabled Students. [Online] Available from: http://www.neads.ca/en/about/en/about/projects/atam/

Knouwds, T. 2010. Including learners with visual impairments in a Namibian mainstream secondary school. Unpublished Master's thesis. Stellenbosch University, Stellenbosch.

Kondrat, M.E. 2013. *Encyclopaedia of Social Work.* National Association of Social Workers and Oxford University Press. USA.

Kranke, D., Jackson, S.E., Taylor, D.A., Anderson-Fye, E., & Floersch, J. 2013. College student disclosure of non-apparent disabilities to receive classroom accommodations.

*Journal of Postsecondary Education and Disability*, 26(1): 35–51. [Online] Available from: http://www.case.edu/artsci/anth/documents/Collegestudentdisclosureofnon-apparentdisabilitiestoreceive.pdf

Kumar, R. 2005. *Research methodology: A step- by step guide for beginners*. 3rd ed. London: SAGE.

Kumar, A. 2011. *Research and writing skills*. New York, NY: Lulu Press.

Kwon Kang, H. & Luff, A.J. 2008. Management of retinal detachment: A guide for non-ophthalmologists. *British Medical Journal*, 336: 1235–1240.

Landsberg, E. 2016. Visual impairment. In Landsberg, E., Kruger, D. & Swart, E. (eds.). *Addressing barriers to learning: A South African perspective*. 3rd ed. Pretoria: Van Schaik. 407–427.

Lehmann, J.P., Davies, T.G.,& Laurin, K. 2000. Listening to student voices about postsecondary education. *Teaching Exceptional Children.* 32(5), 60-65.

Lillywhite, A. & Wolbring, G. 2019. Undergraduate disabled students as knowledge producers including researchers: A missing topic in academic literature. Education Sciences. [Online] Available from: DOI:10.3390/educsci9040259

Lourens, H. 2015. *The lived experiences of higher education for students with a visual impairment: A phenomenological study at two universities in the Western Cape, South Africa*. PhD dissertation. Stellenbosch University, Stellenbosch.

Lourens, H., & Swartz, L. 2016. 'It's better if someone can see me for who I am': Stories of (in)visibility for students with a visual impairment within South African Universities. *Disability & Society*, 31(2): 210–222. [Online] Available from: http://dx.doi.org/10.1080/09687599.2016.1152950

Lourens, H., & Swartz, L. 2020.'Every now and then you slip up and then you are in trouble': The responsibility on students with visual impairments to access reasonable accommodations in South Africa. *International Journal of Disability, Development and Education*, 67:3, 320–335. [Online] Available from: https://doi.org/10.1080/1034912x.2019.1587152

Lourens, H., Watermeyer, B., & Swartz, L. 2019. Ties that bind, and double-bind: visual impairment, help, and the shaping of relationships. *Disability and Rehabilitation*, 41(16): 1890–1897. [Online] Available from: https://doi.org/10.1080/09638288.2018.1450454

Lowenfeld, B. 1981. *Berthold Lowenfeld on blindness and blind people: Selected papers*. New York: American Foundation for the Blind.

Lyner-Cleophas, M. 2016. *Staff and disabled students' experiences of disability support, inclusion and exclusion at Stellenbosch University*. PhD dissertation. Stellenbosch University, Stellenbosch.

Lyner-Cleophas, M. 2020.Online teaching should also consider students with disabilities. *Daily Maverick,*18 June 2020*.*

Madriaga, M.2007. Enduring disablism: Students with dyslexia and their pathways into UK higher education and beyond. *Disability and Society*, 22(4), 339-412.doi:10.1080/09687590701337942

Matshedisho, K.R. 2007. The challenge of real rights for disabled students in South Africa. *South African Journal of Higher Education*,21: 706–716. DOI:10.4314/sajhe,v21i4.25692.

Matshedisho, K.R. 2010. Experiences of disabled students in South Africa: Extending the thinking behind disability support. *South African Journal of Higher Education*, 24: 730–744. [Online] Available from: http://www.sajhe.org.za/volumes/volume-24-2010/volume-24-5/at.../file.

Maude, S.P. 2011. Early childhood intervention: Shaping the future for children with special needs and their families, Vol. 2. Santa Barbara, Ca: Praeger.

McBroom, L.W. 1997. Making the grade: College students with visual impairments. *Journal of Visual Impairment & Blindness*, 91 (3):216–270. [Online] Available from: http://www.afb.org/afbpress/pubjvib.asp/ DocID=jvib910310

McGuire, J.M., Scott, S.S., & Shaw, S.F. 2006.Universal design and its application in educational environments. *Remedial and Special Education,* 27(3): 166–175. DOI:10.1177/07419325060270030501

Merriam, S.B. 1998. *Qualitative research and case study applications in education. Revised and expanded from case study research in education*. San Francisco: Jossey-Bass.

Merriam, S.B. 2009. *Qualitative research: A guide to design and implementation.* San Francisco: John Wiley & Sons.

Mkhize, Z. 2014. The place of social work as a support service for tertiary students. Unpublished thesis, University of Zululand, South Africa.

Mokiwa, S.A., & Phasha, T.N. 2012.Using ICT at an open distance learning (ODL) institution in South Africa: The learning experiences of students with visual impairments. *Africa Education Review,* 9(1):136–151. DOI:10.1080/18146627.2012.755286

Mouton, J. 2001. *How to succeed in your Masters & Doctoral Studies. A South African guide and resource book*. Pretoria: Van Schaik.

Mouton, J. 2005. *How to succeed in your Masters & Doctoral Studies. A South African guide and resource book*. Pretoria: Van Schaik.

Mullins, L., & Preyde, M. 2013.The lived experiences of students with an invisible disability at a Canadian university. *Disability and Society*, 28(2): 147–160. DOI:10.1080/09687599.2012.752127

Mutanga, O. 2017. Students with disabilities' experience in South African higher education – A synthesis of literature. *South African Journal of Higher Education*, 31(1): 135–154. http://dx.doi.org/10.20853/31-1-1-1596.

Mutanga, O. 2018. Inclusion of students with disabilities in South African higher education. *International Journal of Disability, Development and Education*, 65(2): 229–242. DOI: 10.1080/1034912x.2017.136846.

Naicker, S.M. 2005. Inclusive education in South Africa: An emerging pedagogy of possibility. In D. Mitchell (ed.), *Contextualizing inclusive education*. Abingdon, UK: Routledge: 230–252.

Naidoo, A. 2010.Students with disabilities' perceptions and experiences of the disability unit at the University of KwaZulu-Natal: Howard College Campus. Unpublished Master's dissertation. University of KwaZulu-Natal, South Africa.

Nash, M., Munford, R. & O' Donoghue, K. 2005. *Social work theories in action*. London: Jessica Kingsley Publishers.

Ndeya-Ndereya, C.N. & van Jaarsveldt, D.E. 2015. 'It's not my problem': exploring lecturers' distancing behaviour towards students with disabilities. *Disability & Society*, DOI:10.1080/09687599.2014.994701

Nel, M., Engelbrecht, P., Nel, N., & Tlale, D. 2013. South African teachers' views of collaboration within an inclusive education system. *International Journal of Inclusive Education*, (18): 903–917. DOI:10.1080/13603116.2013.858779.

Ngubane-Mokiwa, S.A. 2013. Information and communication technology as a learning tool: Experiences of students with blindness. Unpublished doctoral dissertation. University of South Africa, Pretoria, South Africa.

Oliffe, J., & Thorne, S. 2007.Men, masculinities and prostate cancer: Australian and Canadian patient perspective of communication with male physicians. *Qualitative Health Research,*17(2): 149–161. DOI:10.1177/1049732306297695

Oliver, M.1989. Disability and dependency: A creation of industrial societies? In L. Barton, (ed) *Disability and Dependency.* London: Falmer Press: 6–22.

Oliver, M. 1990. *The politics of disablement.* London Macmillan Press.

Oliver, M. 1996. Defining impairment and disability: Issues at stake. In C. Barnes, & G. Mercer (eds.). *Exploring the divide*. Leeds: The Disability Press: 29–54.

Oliver, M. 2004.The social model in action: If I had a hammer. In C. Barnes, C. Thomas, & S. French (eds.). *Disabling barriers, enabling environments*. London, SAGE: 7–12.

Oliver, M. 2009.*Understanding disability. From theory to practice*. London: Palgrave MacMillan.

Oliver, M. & Barnes, C. 1998. *Disabled people and social policy: from exclusion to inclusion.* London: Longman.

Patton, M.Q. 2008. *Utilisation-Focused Evaluation*. 4th ed. Thousand Oaks, CA: SAGE.

Parker, V. 1999. Personal assistance for students with disabilities in HE: The experience of the University of East London. *Disability and Society,*14(4): 483–504.

DOI: 10.1080/09687599926082

Reichert, E. 2007. *Challenges in human rights: A social work perspective.* New York: Columbia University Press.

Republic of South Africa (RSA).1996. *Constitution of the Republic of South Africa*. Pretoria: Government Printing Works.

Riddell, S., Tinklin, T. & Wilson, A. 2005. *Disabled Students in Higher Education.* New York: Routledge.

Riordan-Eva, P. 2011. Anatomy and embryology of the eye. In P. Riordan-Eva & E.T. Cunningham. *Vaughan & Asbury's general ophthalmology.* 18th ed. New York: McGraw Hill, 1–26.

Riordan-Eva, P. & Cunningham, E.T. 2011. *Vaughan & Asbury's general ophthalmology.* 18th ed. New York: McGraw Hill.

Scott, R. 2009. Undergraduate educational experiences: The academic success of college students with blindness and visual impairments. Unpublished doctoral dissertation. North Carolina State University. Retrieved from http://repository.lib.ncsu.ed.

Seyama, L.G. 2009. Information seeking behaviour of students with visual impairments: A case study of the University of KwaZulu-Natal, Pietermaritzburg. Unpublished Master's dissertation. University of KwaZulu-Natal, Pietermaritzburg, South Africa.

Shaw, S. 2007. Postsecondary education. In L. Florian (ed.). *The Sage handbook of special education*. London: SAGE: 391–403

Sherwood, L. 2010. *Human physiology: From cells to systems* 7th ed. Brooks/Cole, Cengage Learning. ISBN: 978 0 495 39184 5.

Shlasko, D., Peters, M.L., & Ostiguy, B J. 2016. Ableism. In M. Adams. (ed.). *Teaching for diversity and social justice.* 3rd ed. New York and London: Taylor & Francis Group.

Silberman, R. & Sacks, S. 1998. *Educating learners who have visual impairments with other disabilities.* New York: Hamilton Printing.

South African Council for Social Service Professions (SACSSP) 2008.Scope of practice: Social work final draft.

South African Disability Alliance. 2017. The Right to Education for Children with Disability Alliance. *Inclusive Education South Africa*. [Online ] Available from: www.included.org.za

Statistics South Africa (StatsSA). 2013. [Online] Available from: http://beta2statssa.gov.za/ (5/1/2014)

Statistics South Africa (StatsSA). 2016.Community survey [Online] Available from: www.statssa.gov.za/ (30/ 6/2016)

Stellenbosch University Disability Access Policy.2018. Stellenbosch University. [Online] Available from: www.sun.ac.za/policies

Stellenbosch University.2013. Institutional Intent and Strategy 2013- 2108. [Online]. Available: https://www.sun.ac.za/english/about-us/strategic-documents [2017,13April].

Stellenbosch University Student Information System (SISS). 2016–2020. Statistics: Students with declared disabilities, Stellenbosch University.

Stellenbosch University Statistical Profile. 2020. Student Enrolment Overview, Official Stats. Stellenbosch University. [Online] Available from: www.sun.ac.za.

Stellenbosch University Student Information System (SISS). 2020. Test and examination concessions, Stellenbosch University.

Sukhraj-Ely, P. 2008. Inclusive education policy and practice: Investigating the educational rights and needs of learners and students with visual impairments in South Africa. Unpublished doctoral dissertation. University of KwaZulu-Natal, Howard College Campus, South Africa.

Swart, E. & Greyling, E. 2011. Participation in higher education: Experiences of students with disabilities. *Acta Academica,* 43(4):81–110. [Online] Available from: http://www.sabinet.co.za/abstracts/academ/academ_v43_n4_a4.html

Swart, E. & Pettipher, R. 2011. A framework for understanding inclusion. In E. Landsberg, D. Kruger, & E. Swart. (eds.). *Addressing barriers to learning: A South African perspective* 2nd ed. Pretoria: Van Schaik: 3–23.

Swart, E. & Pettipher, R. 2016. A framework for understanding inclusion. In E. Landsberg, D. Kruger, & E. Swart, E. (eds.). *Addressing barriers to learning: A South African perspective* 3rd ed. Pretoria: Van Schaik: 3–27.

Taylor, G., & Palfreman-Kay, J.M. 2000. Helping each other: Relations between disabled and non-disabled students on access programmes. *Journal of Further and Higher Education*, 24(1): 39–53. DOI:10.1080/030987700112309

Terre Blanche, M., Durrheim, K. & Painter, D. (eds.). 2006. *Research in Practice. Applied Methods for the Social Sciences*. 2nd ed. Cape Town: UCT Press.

*The American Heritage Dictionary of the English Language*. 4th ed. 2000.Houghton Mifflin Harcourt Publishers.

Tutty, L.M., Rothery, M.A. & Grinnell, R.M. 1996. *Qualitative research for social workers.* London: Allyn & Bacon.

Unrau, Y.A., Gabor, P.A. & Grinnell, R.M. 2007. *Evaluation in social work: the art and science of practice.* London: Oxford University Press.

United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). 2007. *Convention on the Rights of Persons with Disabilities and Optional Protocol.* [Online]. Available: http://www.un.org/disabilities.

United Nations Educational, Scientific and Cultural Organisation (UNESCO). 2015.The *right to education for persons with disabilities: Overview of the measures supporting the right to education for persons with disabilities reported on by member states, Monitoring of the implementation of the Convention and Recommendations against Discrimination in Education* (8th Consultation) United Nations Educational, Scientific and Cultural Organisation, UNESCO, Paris.

Vancil, D. 1997. Steps to success in college for students with visual impairments. *Journal of Visual impairment and Blindness*, 91(3): 219–223. [Online] Available from: http://www.afb.org/myafb.aspx

Visser, M. 2007. *Contextualising community psychology in South Africa*. Pretoria: Van Schaik

Walton, E. & Lloyd, G. 2011. An analysis of metaphors used for inclusive education in South Africa**.** *Acta Academica*, 43(3): 1–31.

Wait, J., Meyer, J., & Loxton, H. 2005. *Menslike ontwikkeling: 'n Psigososiale perspektief.* Parow East: Ebony Books.

Watermeyer, B. 2013.*Towards a Contextual Psychology of Disablism.* USA and Canada: Routledge.

Watermeyer, B., & Swarts. L. 2008.Conceptualising the psycho-emotional aspects of disability and impairment: The distortion of personal and psychic boundaries*, Disability and Society*,23(6): 599–610.doi:10.1080/096875908023228477

Weedon, E., & Riddell, S. 2009. Troublesome transitions? Disabled students' entry into and journey through higher education. In M. Fuller, J. Georgeson, M. Healey, A. Hurst, K. Kelly, S. Riddell, H. Roberts, & E Weedon (eds.), *Improving disabled students' learning.* London: Routledge: 131–146.

World Health Organization (WHO). 2001. International classification of functioning, disability and health (ICF). Geneva, WHO.

World Health Organization (WHO) & World Bank. 2011. Word report on disability.[Online] Available from: http://whqlibdac.who.int/publications/2011/9789240685215_eng.pdf

World Conference on Special Needs Education: Access and Quality. 1994. The Salamanca Statement and Framework for Action on Special Needs Education. Unpublished document from Special Education Conference. 1994, Salamanca, Spain.

Xu, Y. & Filler, J. 2008. Facilitating family involvement and support for inclusive education. *The School Community Journal*. 18(2):53–72.

Zerberto, A.B, Lopes, FF.D.S., Montilha, R.D.C.I, & Gasparetto, M.E.R.F. 2015. Interdisciplinary team performance with students that have low vision due to their diagnosis of Stargardt disease*. Revista CEFAC*, 17(1): 291–299.

# ANNEXURE A: INSTITUTIONAL PERMISSION

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot · your knowledge partner

6 July 2015

Mrs Melanie Willems

Centre for Student Counselling and Development Stellenbosch University

Dear Mrs Willems

**Concerning research project:** *Logistical, teaching and learning challenges of undergraduate students with visual- impairments at a selected university*

The researcher has institutional permission to proceed with this project as stipulated in the institutional permission application. This permission is granted on the following conditions:

• The researcher must obtain ethical clearance before commencing with this study.

• Participation is voluntary.

• Persons may not be coerced into participation.

• Persons who choose to participate must be informed of the purpose of the research, all the aspects of their participation, the risks to participation, their role in the research and their rights as participants. Participants must consent to participation. The researcher may not proceed until she is confident that all the before mentioned has been established and recorded.

• Persons who choose not to participate may not be penalised as a result of non-participation.

• Participants may withdraw their participation at any time, and without consequence.

• The data must be responsibly and suitably protected.

• The researcher must pay due diligence in seeing that the data is handled in the strictest confidence.

• Data must be collected and processed in a way that ensures the anonymity of all participants.

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- The use of the collected data may not be extended beyond the purpose of this study.

- Individuals may not be identified in the report(s) or publication(s) of the results of the study.

- The privacy of individuals must be respected and protected.

- The researcher must conduct her research within the provisions of the Protection of Personal Information Act, 2013.

Best wishes,

Prof Ian Cloete

Senior Director: Institutional Research and Planning

# ANNEXURE B: ETHICAL CLEARANCE



UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
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**NOTICE OF APPROVAL**

REC Humanities Progress report form

7 November 2018

Project number: 2359

Project Title: Logistical, teaching and learning challenges of undergraduate students with visual impairments at a selected university

Dear Mrs. Melanie Willems

Your REC Humanities Progress report form submitted on 3 October 2018 was reviewed and approved by the REC: Humanities.

Please note the following for your approved submission:

**Ethics approval period:**

| Protocol approval date (Humanities) | Protocol expiration date (Humanities) |
|---|---|
| 7 November 2018 | 6 November 2019 |

**GENERAL COMMENTS:**

Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

**If the researcher deviates in any way from the proposal approved by the REC: Humanities, the researcher must notify the REC of these changes.**

Please use your SU project number (2359) on any documents or correspondence with the REC concerning your project.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

**FOR CONTINUATION OF PROJECTS AFTER REC APPROVAL PERIOD**

Please note that a progress report should be submitted to the Research Ethics Committee: Humanities before the approval period has expired if a continuation of ethics approval is required. The Committee will then consider the continuation of the project for a further year (if necessary)

**Included documents:**

| Document Type | File Name | Date Version |
|---|---|---|
| Informed Consent Form | ANNEXURE B Consent to participate.docx 2018 | 03/10/2018 First 2018 |
| Research Protocol/Proposal | Melanie Willems Research Proposal 4nd Draft EDITED | 03/10/2018 first |
| Default | REC Humaniora Progress report.doc Melanie Willems | 03/10/2018 first |

If you have any questions or need further help, please contact the REC office at cgraham@sun.ac.za.

Sincerely,

Clarissa Graham

REC Coordinator: Research Ethics Committee: Human Research (Humanities)

*National Health Research Ethics Committee (NHREC) registration number: REC-050411-032. The Research Ethics Committee: Humanities complies with the SA National Health Act No.61 2003 as it pertains to health research. In addition, this committee abides by the ethical norms and principles for research established by the Declaration of Helsinki (2013) and the Department of Health Guidelines for Ethical Research: Principles Structures and Processes (2nd ed.) 2015. Annually a number of projects may be selected randomly for an external audit.*

# ANNEXURE C: PERMISSION OF CENTRE TO CONDUCT RESEARCH



2 April 2019

Dear Mrs Willems

<u>Melanie Willems - M Social Work -  12400416</u>

The Disability Unit at the Centre for Student Counselling and Development gives permission to Mrs Willems to conduct research with undergraduate visually impaired students at Stellenbosch University (SU). This is granted in good faith and subject to the approval by the relevant research committee at SU as well as the SU institutional approval by the SU Division for Institutional Research and Planning.

The research topic is: The experiences of undergraduate students with visual impairments at a selected University with regard to logistical, teaching and learning challenges. The supervisor of this research is Dr Zibonele Zimba from the Social Work Department of SU.

In order to make the questionnaire and consent forms to be used accessible to visually impaired students, Ms Willems will ask the Disability Unit: Resource Office to assist.

Please send me a copy of the SU institutional approval to do the research before approaching the students.

Yours sincerely.


Dr Marcia Lyner-Cleophas

# ANNEXURE D: INFORMED CONSENT FORM



## STELLENBOSCH UNIVERSITY

## CONSENT TO PARTICIPATE IN RESEARCH

_____

**MY TITLE: Logistical, teaching and learning challenges of undergraduate students with visual - impairments in Higher Education.**

You are asked to participate in a research study conducted by Melanie Willems, a Master' s degree student from the Social Work Department at Stellenbosch University. The results of this study will become part of a research thesis. You were selected as a possible participant in this study because you are an undergraduate student with a visual impairment at Stellenbosch University which is part of the population group under investigation.

## 1. PURPOSE OF THE STUDY

The intent of the proposed study would be to obtain an understanding of the experiences faced by undergraduate students with visual impairments at Stellenbosch University. The investigation will focus on gaining insight into the experiences of the undergraduate students with visual impairments with regard to logistical, teaching and learning challenges that they might face at a selected university. It also aims to make recommendations to improve services to undergraduate students with visual impairments.

## 2. PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following:

A semi-structured interview will be utilised to gather information confidentially. You need not indicate your name or any particulars on the interview schedule. I will use your name only to initiate contact with you. Your name will not be used in the study for privacy reasons. The schedule will be completed during an interview conducted by a student-researcher.

## 3. POTENTIAL RISKS AND DISCOMFORTS

Any uncertainties on any of the aspects of the schedule you may experience during the interview can be discussed and clarified at any time. It might be uncomfortable to speak about personal experiences. The researcher is a social worker of profession and is trained in interview skills and will create a context which is comfortable for the participants.

## 4. POTENTIAL BENEFITS TO SUBJECTS AND / OR TO SOCIETY

The participant will not benefit directly from participation in this study. The society will benefit from the research as it could be beneficial to the university community. Stellenbosch University could benefit from the study as they would become aware of prevailing challenges and needs; and possibly device ways to address them. The results are anticipated to make recommendations for the Disability Unit of Stellenbosch University to consider for Implementation. This information could be used by the Disability Unit for further planning in service delivery.

## 5. PAYMENT FOR PARTICIPATION

No payment in any form will be received for participating in this study.

## 6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of restricted access to the data. Only the research promoter, Dr Zibonele Zimba and the researcher, Melanie Willems, will have access to the data. A storage box with a safe lock will be used. Electronic data will be saved in a password required laptop. In addition, questionnaires and transcripts will be locked in cabinet. Audio recordings of the interviews will be erased immediately after transcription. You may request to listen to your audio recordings before it is erased. Transcribed interviews will be made available for your perusal should you wish to approve. Only the researcher will have access to the recordings. The recordings will be deleted after the research thesis is successfully finalised.

## 7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to participate in the interview and still remain in the study. The researcher may withdraw you from this research if circumstances arise which warrant doing so, for example should you

influence other participants in their participation on the study. Should you feel any emotional discomfort during the study, you will be referred to a registered social worker at the Centre for Student Counselling and Development, Unit for Psychotherapeutic and support services at Stellenbosch University at 021 808 4994. Your permission will first be sought to this referral.

## 8. IDENTIFICATION OF RESEARCHER

If you have any questions or concerns about the research, please feel free to contact: Melanie Willems, 0823124668 or my supervisor Dr Zibonele Zimba, Department of Social Work, University of Stellenbosch, Tel. 021-808 2488, Email: zfzimba@sun.ac.za

## 9. RIGHTS OF RESEARCHPARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

| SIGNATURE OF RESEARCH PARTICIPANTS OR LEGAL REPRESENTATIVE |
|---|

The information above was described to me the participant by _____

in English and the participant is in command of this language or it was satisfactorily translated to him / her. The participant was given the opportunity to ask questions and these questions were answered to his / her satisfaction.

I hereby consent voluntarily to participate in this study.

_____

**Name of Participant**

_____                          _____

**Signature of Participant**                                                      **Date**

| SIGNATURE OF INVESTIGATOR |
|---|

I declare that I explained the information given in this document to _____ [name of subject/participant]. [He / She] was encouraged and given ample time to ask me any questions. This conversation was conducted in English and no translator was used.

_____                          _____

**Signature of Investigator**                                        **Date**

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# ANNEXURE E: IN-DEPTH INTERVIEW SCHEDULE

**Themes for interviews**

**Logistical, teaching and learning challenges of undergraduate students with visual impairments at a selected university.**

**Student with Disabilities**

According to the University records, you indicated that you have a visual impairment when you applied to the University. We would like to ascertain your experiences on campus, challenges you might experience and knowledge of support structures on campus.

**Theme One: Background Information of Participants**

1. In which year of study are you?
2. In which faculty do you study?
3. What is your gender?
4. Could you explain your type of visual impairment?
5. What cause your visual impairment?
6. Are you a university resident student or do you stay private?

**Theme Two: Experience of Campus Life as a Student with a Visual Impairment**

1. What are your experiences on campus life as a student with a visual impairment?
2. What are the different experiences you encounter on campus?
   - Reflect in all levels of experiences.
   - Micro, meso and Macro level. (in residence, social events, student societies for example, Dis Maties. academic life).
3. Are your experiences positive or negative? Please explain your answer
4. What kind of support do you receive from the University?
   4.1    Extra writing time
   4.2    A scribe (someone to write down your test and /or exam answers for you)

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4.3    The use of a computer to write tests and / or exams

4.4    Brailed tests and Exams

4.5    Enlarge print

4.6    A special tutor

4.7    Permission to record classes.

4.8    A separate room/ to write tests and exams.

4.9    Special residence placement

4.10   Lecture rooms and practical work

4.11   Signage to buildings - General infrastructure such as buildings, lifts, tactile paving.

4.12    Study and readings material in alternative formats (for example, Braille, enlarged font and electronic format)

4.13   Other support

5. How satisfied are you with the support that you received from the University thus far?

6. University Office that renders services to students with disabilities

6.1 Do you know the university office that renders services to students with disabilities?

6.2 Do you make use of the university office that render services to students with disabilities?

6.3 If yes, do reflect on the different services which the university office that renders services to students with disabilities provide?

1. Special tests and exams accommodations
2. Advice about assistive technology and innovative support
3. Tutor support
4. Financial support – bursaries
5. Mobility orientation training on campus
6. Assist with residence placement
7. Academic support
8. Assist with accessibility issues of buildings and roads on campus.

6.4 If no, is there any reasons why you do not make use of the support services?

7. Do you make use of the support provided by the University office that render services to students with visual impairments?

If yes, what are your experiences.

1. Text conversion of reading material.
2. What is your experience when you write your tests and exams in the Assistive technology room?
3. Do you have access to assistive technology for example JAWS, ZoomText, WYNN software?
4. What is your experience when you do assignments in the assistive technology room?

**Theme Three: Logistical, Teaching and Learning Challenges**

1. Do you experience any challenges on campus?
2. When you need to go to class?
3. When you go on to the University website to access information?
4. When you need to go on to the online learning management system to access lectures notes.
5. When you make use of the Shuttle services?
6. you need to write tests and examinations?
7. Do you experience any challenges to obtain your study and reading material in alternative formats (for example, electronic format, Braille or enlarge font)?

**Theme Four: Support Needed by Students with Visual Impairments to Overcome Logistical, Teaching and Learning Challenges**

1. What other support do you need?
2. Any questions or recommendations to improve the services of the University Office which render services to students with disability.