ASSESSING THE EXPANDED CORE CURRICULUM FOR LEARNERS WITH VISUAL IMPAIRMENTS IN SPECIAL SCHOOLS

By

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DECLARATION

Student number: 50790773

I declare that ASSESSING THE EXPANDED CORE CURRICULUM FOR LEARNERS WITH VISUAL IMPAIRMENTS IN THE SPECIAL SCHOOL is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

MAGDALENE SIMALALO

APRIL 2017

SIGNATURE   DATE

DEDICATION

For my beautiful children, Gabriel, Augustine and Caleb whose

love and energy became my driving force.

For my beloved parents Pendani Simalalo and Jessie Sikwati who

taught me good things about life.

For my gallant brother Christopher Simalalo who encouraged

me to enroll in university.

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ABSTRACT

This study was conducted to assess the implementation of the expanded core curriculum for learners with visual impairments in special schools in Zambia sub – Saharan Africa.

A qualitative case study was used. The main instruments in data collection were face-to-face interviews, a focus group discussion, questionnaire and documents. Data was collected from 28 learners with visual impairments from Grade 5 to 12, 22 teachers from 3 selected special schools; 10 university students, 1 lecturer at university level; 2 college lecturers and 2 curriculum specialists. All the participants were sampled using the purposive sampling procedure.

The study found that ECC was taught in segmented patterns without a curriculum guide and learners did not learn all the skills. Methodologies used in teacher training and at school level were inadequate. The main challenges were lack of clear curriculum on ECC, lack of time allocated for teaching ECC, non-availability of teaching and learning resources. The strategies to improve delivery of ECC included formulation of clear ECC and improvement in personnel preparation.

The findings offer insight into the kind of ECC skills offered in schools and the challenges that hinder the full teaching of skills. In order to improve skills delivery, all stakeholders: teachers, trainers, curriculum specialists and parents, should collaborate.

Key words:

Expanded core curriculum, visual impairment, core curriculum, inclusion, special educational needs, social inclusion, disability, blind, low vision.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADL	-	Activities for Daily Living
AFB	-	American Federation of the Blind
AT	-	Assistive Technology
CBM	-	Christian Blind Mission
CDC	-	Curriculum Development Centre
ECC	-	Expanded Core Curriculum
LVI	-	Learners with Visual Impairments
MoE	-	Ministry of Education
O&M	-	Orientation and Mobility
SVI	-	Students with Visual Impairments
TESS	-	Teacher Education and Specialised Services
TD	-	Dysontogenesis
UN	-	United Nations
UNCRPD	-	United Nations Convention on the Rights of Persons with Disabilities
UNICEF	-	United Nations Children's Emergency Fund
UNZA	-	University of Zambia
VI	-	Visual Impairment
ZAMISE	-	Zambia Institute of Special Education
ZECF	-	Zambia Education Curriculum Framework
ZICTA	-	Zambia Information and Communications Technology Authority

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CHAPTER 1
AN INTRODUCTORY ORIENTATION

1.1 INTRODUCTION

Over the years, teachers who are teaching learners with visual impairments have realised the need to give instruction beyond reading, writing and mathematics (Hatlen, 1996: 27). Despite studying the same basic academic subjects also called core curriculum which the sighted learners do, learners with visual impairments need to learn additional skills known as expanded core curriculum (ECC). The ECC is sometimes referred to as disability-specific skills or vision-related skills. The phrase "expanded core curriculum" was first formulated by Phil Hatlen in 1996 (Sapp & Hatlen, 2010: 338). These skill areas are compensatory or functional academic skills, orientation and mobility, social interaction skills, career education and independent living skills. Other skills are recreation and leisure, assistive technology, visual efficiency and self-determination.

Lohmeier, Blankenship and Hatlen (2009a: 104) are of the view that sighted individuals learn these areas incidentally and through observing role models but this is not likely to happen for learners with visual impairments. These learners may not learn these skills if deliberate efforts are not made to teach them. Therefore, conscious opportunities have to be created to teach them ECC skills.

Learners with visual impairments need the ECC due to their unique disability-specific needs. This is to say, in addition to the existing academic curriculum of general education, learners with visual impairments need skills for them to adjust to or access the general curriculum and become active participants in society. The ECC has also been viewed as a way of promoting equity. Lohmeier (2008: 32) indicated that equitable education calls for creation of a level playing-field. For learners with visual impairments, a playing-field is levelled exists when instructions and content go beyond accessing the core curriculum.

This study is important in the sense that the researcher believes that the findings have brought out information regarding teaching learners with visual impairments in disability specific skills. The challenges of implementing ECC in the special schools for the learners with visual impairments in Zambia have also been established. The

study has also highlighted the issues that require attention in the education of the learners with visual impairments.

1.2 MOTIVATION FOR THE STUDY

This study was motivated initially by my work as a teacher trainer for teachers of learners with visual impairments for the past twelve years. My experience was that the major focus of the course was around the components in the expanded core curriculum. However, I have had challenges in training these teachers and wondered how well they later teach learners these skills. With the skills from ECC, the learners with visual impairments may become adjusted in all areas of life.

My master's thesis focused on teaching mathematics to learners with visual impairments. Having taught and interacted with such learners, my assumption was that some challenges encountered in learning mathematics and other highly abstract subjects by these learners would be addressed if they were taught skills in the ECC.

Besides teaching, I have been working at the University of Zambia as special needs coordinator. My experiences with students with visual impairment were that some had challenges in technology use like typing, others had not learnt independent travel while some had difficulties with the use of other senses such as touch to read braille. The realisation was that these learners enter university without good skills required for their learning and adjustment in the community. One of my learners confessed that he only learnt the use of a white cane for mobility when he went to a teacher training college. The questions were: Are skills in the ECC taught to learners with visual impairments in Zambia? What is the nature of the disability specific curriculum and its implementation? This study is very useful to my career and personal development as well as to the education of the learners with visual impairments.

1.3 PROBLEM STATEMENT

Current studies (Lohmeier, 2008: 131; McDonnall & Crudden, 2009: 330, Sapp & Hatlen, 2010: 338) in the education of the learners with visual impairments suggest that instruction should consist of both academic and specialised skill areas. The

specialised skill areas also called expanded core curriculum help the visually-impaired to access the core curriculum as well as acquire skills in daily life.

The adoption and implementation of ECC for the learners with visual impairments is believed to be an assurance that they will have an opportunity to fit well and lead successful lives as adults in the community (Lohmeier, 2005: 131). At the centre of delivering ECC is the availability of specialised personnel working with the learners with visual impairments and provision of teaching and learning resources. By secondary school stage, learners are expected to have well developed skills in ECC and should therefore face minimal challenges in accessing the core curriculum and independent living. The present scenario is that learners manifest deficits in critical skills like orientation and mobility and braille literacy. The deficits become prominent at transitional stages such as entry into secondary school and college or university. Therefore, one begins to ponder as to what was obtaining in the schools in terms of delivery of ECC skills, which are a primary or basic necessity for learners with visual impairments. This background gave rise to this study so that issues surrounding ECC for learners with visual impairments could be brought to light and the way forward could be established.

1.3.1 Research Questions

The study is guided by the following main question and its sub-questions:

What is the state of implementing the ECC in schools for learners with visual impairments?

The sub-questions of the study are:

- What constitutes ECC for visually-impaired learners?

- What challenges are encountered in implementing ECC?

- What is the relationship between implementation of ECC, academic and life achievement of the visually-impaired learners?

- What strategies can be employed to ensure effective delivery of ECC?

1.3.2 Aims and Objectives of the Study

The study aims at exploring the state of implementing the ECC for the learners with visual impairments. The objectives of the study are to:

- Explore the nature of ECC for learners with visual impairments in special schools.

- Establish the challenges of implementing the ECC.

- Identify the relatedness between implementation of ECC, academic and life achievement.

- Determine strategies that can be employed to ensure effective delivery of ECC.

1.4 RESEARCH METHODOLOGY AND DESIGN

The detailed account of the methodology and design of the study is given in chapter 4. In this chapter, a brief description is presented.

The study took a qualitative approach. Kothari (2004: 3) defines the qualitative approach as one that investigates the quality or kind of phenomenon. That is, it aims at discovering the underlying motives and desires of participants. It is concerned with subjective assessment of attitudes, opinions and behaviours. This approach was found to be suitable for this particular study because detailed information about various issues related to the implementation of the ECC was gathered mainly from interviews, open-ended questionnaires and focus group discussions. The data were not subjected to rigorous quantitative analysis, although an Excel spread sheet was used to handle the data from the questionnaire with open-ended questions.

The study employed a case study design. According to Ghosh (2008: 225), a case study is an intensive study through which one can know precisely the factors and causes of a particular phenomenon. In itself, it is a kind of qualitative analysis. This design was found suitable because the intention was to take an in-depth look at what constituted an ECC, the way it is taught and how it relates to academic and community life of the learners with visual impairement. In other words, the study intended to explore feelings, attitudes and opinions of people involved in the implementation of the ECC.

Purposive sampling was used. According to Ghosh (2008: 234), purposive sampling is selection of a sample based on judgment of the researcher. Visually-impaired learners, teachers of these learners, lecturers and curriculum specialists formed the sample. The selection of these participants can be explained in the following ways. The learners in schools are the beneficiary of the curriculum, the teachers of the learners with visual impairments were chosen because they were at the centre of implementing the curriculum while the lecturers are the ones who trained the teachers how to teach the learners. The curriculum specialists are responsible for making or developing the curriculum. The university students were selected because they are a product of the schools where ECC skills are taught. To a large extent, they manifested deficits in ECC, hence providing impetus for this study.

The sample had 65 participants comprising of 28 learners with visual impairments from Grade 5 to 12, 22 teachers from 3 selected special schools; 10 university students with visual impairments, 2 curriculum specialists and, 1 university and 2 college lecturers.

Data for the study were obtained through face-to-face interviews, focus group discussions, self-administered questionnaires and documents. Self-administered questionnaires were used to collect data from 22 teachers of the learners with visual impairments; individual interviews were conducted with the 1 university lecturer and 2 college lecturers who trained teachers in education of the learners with visual impairments and also with the 10 university students with visual impairments; and focus group discussions were conducted with learners in the selected schools. An audio-recorder was used to record interviews and focus group discussions and the data were later transcribed into transcripts for analysis. Stake (1995: 66) recommends the use of this strategy because it enhances reliability. The main policy documents and frameworks were consulted in order to give the researcher a guide on the entire education process. These documents formed part of the data that were analyzed in order to get a clear picture regarding the provision of education to all learners.

Data analysis engaged a holistic approach where emerging themes were identified from data. Initially transcripts were made from the interviews and focus group discussions. Using NVivo software, themes or nodes were identified and data from

all respondents was coded on the themes. Coded verbatim were analysed to arrive at significant findings. This approach of analysis shed light on the complexity and relatedness of the issues in the ECC from all the cases or groups of participants.

1.5 MEASURES TO ENSURE TRUSTWORTHINESS

The study endeavoured to remain credible and trustworthy. The following strategies were employed to achieve this. The study engaged crystallisation or triangulation. Hemming (2008: 154) explains that under crystallisation, methods of data collection are mixed. In this study, interviews, documents and self-administered questionnaires and focused group discussions were used to help give a deeper insight and holistic picture of the issues in the ECC. In other words, triangulation of methods gave corroborative evidence from different sources.

The study equally used member checking. According to Punch (1998: 260), member checking means checking the script with the people who gave data. In this study, interview transcripts were taken to the interviewees before and during analysis for them to check for accuracy, confirm, validate and verify information captured in scripts.

1.6 ETHICAL CONSIDERATIONS

Participants in research need to be protected from any kind of harm or loss of dignity (Hatch 2002: 66 & Creswell 2007: 170). In this study, after obtaining permission and clearance from all relevant authorities, an easy access was granted. To protect the participants, the study adhered to the principle of confidentiality, anonymity, freedom to withdraw, respect for privacy and informed consent. According to Ping (1984) in Cohen et al (2007:63) confidentiality is the individual's right to privacy. This right may be denied or violated when the researcher ignore anonymity, and divulge personal information. An assurance of confidentiality often leads to participants' cooperation and collection of credible data. In this study, the participants were ensured that the information collected from them will be used for academic purposes.

Participants in the study participated on a voluntary basis. Volunteerism means that the individual choose to participate freely (Cohen et al. 2007:52). None of the participants were forced or coerced into taking part in the study and guidance was given that they could withdraw from participating without giving reasons. The researcher respected the privacy of the participants by conducting interviews in neutral places (e.g. school campus) and ensured that questions in the instruments did not bring emotional or psychological harm to the participants.

A written and signed informed consent was obtained from those selected to be participants. All the information concerning the aims and the use of data collected was made known to the participants. Diener and Crandall (1978) in Cohen et al (2007:52) define informed consent as a procedure in which an individual choses whether to participate in a study after being informed. The parents or guardians of children who participated in the study gave informed consent and the learners signed the assent form.

1.7 DEFINITION OF CONCEPTS

This section presents definitions of key terms or concepts used in the study. The identified terms were considered to be the backbone of the study and are equally the core issues of the study. A term is initially defined as given by scholars, then a definition to explain its usage in the study follows. The key concepts defined below are: core curriculum, ECC, visual impairments and special school.

1.7.1 Core curriculum

Core curriculum refers to the essential academic content that all learners need to master in a subject learnt from kindergarten through high school. Core curriculum varies from one level to another but build up skills and knowledge. The core curriculum may include subjects such as English language, other languages, mathematics, science, health, physical education, social studies, history, economics, business education, fine arts and vocational education (Hatlen, 1996: 3). In Zambia, the core curriculum is defined as a prescribed programme for all learners and includes learning areas such as natural and environmental sciences, design, technology and entrepreneurship, mathematics, performing and creative arts,

languages, social sciences, business and entrepreneurship. Others are music, religious education, health and physical education, community studies and environmental education (Ministry of Education, Science, Vocational Training and Early Education, 2013: 28-35).

In this study, core curriculum refers to knowledge and skills in the subject areas which are offered to every learner in the education system from early childhood to secondary school.

1.7.2 Expanded Core Curriculum

Expanded Core Curriculum (ECC) is a body of knowledge and skills that is needed by learners with visual impairments in order to access the general curriculum. The skills taught in ECC enable the visually-impaired to live adjusted, independent lives in the community. ECC is also called disability-specific skills (Hatlen, 1996: 2).

Expanded Core Curriculum has generally nine accepted areas of instruction that children and youths with visual impairments, both those who are blind and those with low vision, including those with additional impairments, need in order to be successful in school, the community, and the workplace (Sapp & Hatlen, 2010: 338). The skill areas are compensatory or functional academic skills, orientation and mobility, social interaction skills, career education and independent living skills. Other skills are recreation and leisure skills, assistive technology skills and visual efficiency and self-determination.

In this study, ECC refers to additional skills over and above the core subjects that every learner with visual impairment is expected to take within the general education system from kindergarten to grade12.

1.7.3 Special School

A special school is a specialised school designed to accommodate learners with special learning or behavioural needs. These schools have the benefit of providing the highest degree of structure, routine and consistency throughout the school day. According to Hocutt (1996: 80), a special school can be a residential or day school for children with special needs. Special schools are usually organised according to impairment categories such as schools for the blind or the deaf or for children with

learning difficulties, physical or behavioural problems. Knight, Lingard and Slee (1999: 7) have however argued that, special schools remove any possibility of interacting within regular education contexts and learners develop separate cultural identity and norms

In this study, a special school refers to a residential school which caters for learners with visual impairments.

1.7.4 Visual Impairment

Kalabula (2007: 27) states that the term visual impairment can cover a wide range of conditions, from wearing corrective spectacles to total blindness. At times, visual impairment is used to describe people who have impairments in the structure or functioning of the visual sense organ.

Davis and Hopwood (2003: 10) state that there are various definitions, but the World Health Organisation's (WHO) definitions of terms, based on visual acuity scores, are now the most widely-accepted. These scores are based on the sight perception of people with 'perfect' vision and are written as a fraction. For example, a person with a score of 6/18 implies that he can see when 6 metres from an object that a person with perfect sight would see at 18 metres. Alternatively, a score of 3/60 means that an object at a distance of 3 metres appears in its detail as it would to a person with perfect sight if it were 60 metres away. According to this conception:

● a person scoring between 6/6 and 6/18 is classed as having normal vision;

● a person scoring between 6/18 and 3/60 is classed as having low vision; and

● a person scoring less than 3/60 is classed as being blind.

Smith (1998: 477) has provided a further classification of visual impairments. He states that visual impairments can be divided into two sub-groups: low vision and blindness. "A person with low vision is one who has impairment of visual functioning even after treatment and/or refractive correction, and has a visual acuity of less than 6/18 to light perception, or a visual field of less than 10° from the point of fixation, but who uses, or is potentially able to use, vision for the planning and/or execution of a task" (WHO, 2012: 3). Blindness means that the person uses touch and hearing to learn and does not have functional use of sight. Parents and professionals now tend

to use functional definitions for these two subgroups. This classification system is based on how well people can use their sight, even if its use is severely limited.

In this study, visual impairment will refer to a learner or person whose vision is poor such that they use other senses such as touch, hearing, smell and taste to gather information and concepts in order to learn.

1.8 CHAPTER OUTLINE

This thesis has a total of 6 chapters. Chapter 1 is the introduction. This includes the background information, statement of problem, aims and objectives, purpose of the study, the research questions as well as the rationale.

Chapter 2 presents a review of related literature and studies related to the nature of ECC. The focus is on teacher-training for ECC, the methods used in teaching and learning ECC, provision of teaching and learning resources. The challenges surrounding delivery of ECC are discussed.

Chapter 3 focuses on literature related to strategies in the delivery of ECC. In this chapter, the significance of ECC in the life of a person with visual impairments is propounded.

Chapter 4 of the thesis is the methodology. In this chapter, the design of the study is explained along with the procedures used to select participants, the instruments used to collect information from the field and the procedures of collecting data. This chapter also explains the methods used to analyse data from the field, ways of ensuring that the study is credible and trustworthy as well as how the ethical issues were considered.

Chapter 5 focuses on the presenting and discussing the major findings of the study. The presentation is in the form of themes and verbatim citations from the participants.

Chapter 6 summarises the study and results are presented. Recommendations on the practice as well as future research are outlined.

CHAPTER 2
IMPLEMENTATION OF EXPANDED CORE CURRICULUM

2.1 INTRODUCTION

teaching learners with visual impairments is not easy, more so the ECC. This chapter discusses the different issues pertaining to delivery of ECC to visually-impaired learners. The theoretical framework comes first, where the theory on dysontogenesis is presented to highlight some issues requiring attention when educating visually-impaired learners. This theory indicates that attitudes can affect what is perceived as the potentialities of visually-impaired person. The nature and delivery of ECC is the next area of discussion. The nine areas of the ECC are presented, mainly to show the skills which schools should teach these learners. The delivery of ECC is mainly presented with a focus on ECC teaching personnel, methods, teacher training and the challenges encountered in ECC implementation. The presentation may not fully exhaust all there is in the literature on the subject. However, the significant issues are analysed to help understand the importance of ECC in the life of visually-impaired persons.

2.2 THEORETICAL FRAMEWORK

The theory on dysontogenesis (TD) forms the framework of this study because it brings out three aspects of disability which can be applied to education of the visually-impaired people. Firstly, it points out the dynamic nature of disability and its impact on learners. The important idea is that a child with a disability develops just like the one without a disability except that the one with a disability follows a different developmental path. This idea is significant and takes us to the second aspect of this theory, which is empowerment of persons with disabilities through education, skills and remediation. Instead of focusing on negative elements, a positive view of persons with disabilities is an important ingredient to positive differentiation. With a positive attitude and action, visually-impaired persons can be educated despite impediments and education will lead to their development. Thirdly, the theory focuses on inclusion of persons with disabilities. It brings out specific attitudes and actions needed to create inclusive settings for persons with disabilities – in this

study, the visually-impaired learners. The theory is discussed below with the aim of determining its relevance to the education of visually-impaired learners.

2.2.1 THEORY ON DYSONTOGENESIS

Dysontogenesis theory is a theory put forward by Lev Vygotsky. According to Neuman and Holzman (1993: 4) and Gindis (1999) cited in Daniels, Cole and James (2012: 200), Vygotsky was a Jewish Russian who lived in the period 1896–1934. He was interested in philosophy, literature, art and culture but later turned attention and creativity to fundamental questions of human development and learning. Vygotsky belonged to a cohort of so called romantic scientists. His writing was not academically appealing but more of inspirational, focusing on social and cultural reality. Rodina (2007: 4) states that theory on dysontogenesis was born out of Vygotsky's work on fundamentals of defectology, the study of the "defect". The works appeared from 1924–1934 in which he focused on psychological development among children with disabilities. In his work on dysontogenesis theory, Vygotsky's insight was that the principal problem of disability is not sensory or neurological impairment itself but its social implications. Hence, the paradigm of primary and secondary disability. He also wanted to highlight methodological input in special education and the practice of psychology. Vygotsky's views on the dynamic nature of disability in human beings as well as the role of remediation and inclusion stand out in this theory.

Dysontogenesis as a word can be broken down into three in order to understand it: dys means anomaly, onto means being and genesis means development. But the term simply means deficient development. It deals with the social consequences of disability. Vygotsky (1930a: 181) considered disability as a "social aberration" springing from a child's changing social, environmental relations which consequently cause disturbances in social behaviour. Lumadi (2013: 2) illustrated that the theory talks about two types of disabilities: 'primary disabilities' which is the impairment itself and 'secondary disabilities' which are as a result of the way society negatively treats persons with disabilities. Secondary disability is displayed when parents and teachers continuously pity and consequently help with the assumption that children with disabilities are helpless, depriving them of their independence. Rodina (2007:

12) and Gindis (1999: 3) pointed out that such a disposition hinders "the zone of proximal development" and causes secondary disability. Impairment prevents mastery of skills and knowledge at a normal rate, but social settings and attitudes modify the course of development leading to distortions and delays.

Vygotsky (1930b: 181) stated that disability is dynamic because the changes that take place in a person are influenced by either the nature or remediation and/or education. Gindis (1999: 3), who has analysed dysontogenesis theory, has mentioned that dysontogenesis makes four assertions about development. These are:

- Development is a socio-genetic process taking place in social activities.

- Education 'leads' to development which is brought about by social learning through interaction.

- Development does not occur in a straight line of gains and accumulations but it is a complex process of integration and disintegration.

- Human development resides in mediation by materials, instruments and social situations including signs and language.

According to dysontogenesis theory, there are no developmental delays in human beings. Children with disabilities develop differently from their peers. Vygotsky (1930a: 8) reminds us that disability stems only directly from within children's differences. They are not necessarily slowed down in normal development. They have "development detours" Vygotsky, 1930, cited in Rodina, 2007: 6). Gindis (1999: 2) indicates that the development paths in these children need to be identified and assessed so that empowerment and remediation can be effective. Lack of opportunities to learn can have a more serious and far-reaching impact on development than innate characteristics.

Vygotsky's theory on dysontogenesis is founded on two aspects or principles: a positive resource oriented approach and remediation through education. These two aspects are discussed below.

2.2.1.1 Positive resource-oriented approach

A positive resource-oriented approach which implies a favourable societal view on children with disabilities, "giving preference to strengthening and empowerment of individual skills rather than the traditional stress on weaknesses or deviations", is regarded as a key principle (Lumadi, 2013: 2; Rodina, 2007: 3). This is known as positive differentiation. In studying children with disabilities, the primary focus should be children's innate abilities (resources). According to Vygotsky, the resources of children with disabilities should constitute a basis for optimal development of their potential. He criticised the pathology and symptom-centred approaches in special education. He argued that society should focus on positive characteristics of persons with disabilities. The main task of society is to support intact functions so that persons with disabilities can realise their full potential. For Vygotsky, the social needs of a blind child are more critical than individual needs. This means that it is important for people dealing with visually-impaired learners to focus more on challenges visually-impaired people face in life and ways of overcoming them than focusing on the disability (Gindis 1999: 335). In view of the foregoing, Vygotsky (1930a) cited in Gindis (1999: 335) argued that the main focus of special education should be to change negative attitudes of society towards primary disabilities. Society's view on disability is influenced by attitudes therein. With positive attitudes, society would apply positive differentiation.

The theory on dysontogenesis calls for implementation of a responsive curriculum for positive differentiation and inclusion. The argument is that schools should respond and change to accommodate learners with special needs. The curriculum should also be inclusive. For the visually-impaired learners, positive differentiation and inclusion is brought about through ECC.

2.2.1.2 Remediation through education

Vygotsky (1930a) proposed that special education should have the same goals as general education, which means it should lead to development (*educere* in Latin meaning to lead out). Key to dysontogenesis is the role of remedial education in development. Rodina (2007: 17) states that the establishment of individual, remedial educational programmes and selections of remedial-developmental tools requires a thorough analysis of the structures of disabilities, determining the psychological

structures of "the zone of proximal development". In other words, assessment and evaluation in special education should precede intervention. This has actually become the practice in special education.

Compensatory mechanisms or strategies should be put in place to enable learners with disabilities to benefit from education. The belief is that alternative but equivalent strategies such as Braille, sign language, symbols and other tools which convey the same educational information and meaning must be utilised. Special education should employ specific methods because learners have unique needs which require compensatory strategies (Gindis 1999: 6). Drawing on Vygotsky's work, Edmiston (2007: 339) states that children who have impairments in a particular context make meaning in related but different ways from the people without impairments. This is so because children with impairments develop compensatory strategies for learning which become their unique strengths. As for the visually-impaired, the compensatory strategies can be enhanced by teaching the learners skills in the ECC which are specific to their exceptional needs.

The theory of dysontogenesis in relation to education of learners with disabilities throws light on the need for assessment and provision of services for empowerment. Vygotsky reminds us that the consequences of primary disability such as visual impairment should be eliminated. This can be done through providing programmes that focus on developing innate potential in learners. Vygotsky's idea that education of learners with disabilities must be mediated by means of available psychosocial or technical tools, is critical in the development of higher psychological functions. The ECC for visually-impaired learners relies heavily on Vygotsky's ideas of mediated learning, psychosocial and technical support.

2.3 THE NATURE AND DELIVERY OF EXPANDED CORE CURRICULUM

In this section, the areas of the ECC are discussed in detail. It is within this section where issues related to the implementation of ECC are analysed.

2.3.1 Curriculum Accessibility

Westwood (2012westwoo: 12) has defined curriculum content as knowledge, concepts, skills, strategies, attitudes and values that teachers plan to introduce to their learners over a given period of time. In simple terms, curriculum content can be thought of as the 'what' to teach, while instructional methods can be thought of as the 'how' to introduce and teach that content. Curriculum content may not be separated from other components in the learning and teaching process, because, in practice, all elements are closely related and interdependent. Indeed, some definitions of curriculum actually embrace content, instructional goals, methods of teaching, resources for learning and assessment procedures. Gatto (2005: 1) asserts that some definitions even include the 'hidden curriculum,' covering all the subtle influences that are present in a school that covertly convey values, attitudes, behaviour patterns and expectations.

Westwood (2012: 13) states that in terms of conceptualising curriculum content, it is usually described in terms of its scope and sequence, that is the breadth and depth of the content to be covered, and the order in which topics, concepts and skills are introduced from simple to complex, bearing in mind the age and ability of the learners. Adaptations made to a curriculum usually involve the scope and depth of the subject matter, rather than the sequence of topics.

Core curriculum refers to the essential content that all learners need to master in a particular subject. According to Hatlen (1996: 3), core curriculum may include subjects such as English language, other languages including indigenous ones, Mathematics, Science, Health, Physical Education, Social Studies, History, Economics, Business Education, Fine Arts and Vocational Education.

Vision is the primary sense upon which most traditional education strategies are based. These strategies must be modified to reflect the child's visual, auditory and tactile or visual capabilities. A child with a severe visual loss can directly experience only what is within arm's reach and can be safely touched, and in most cases, what can be heard. American Foundation for the Blind (AFB) (2010: 1) suggests that as the child grows, the absence or reduction of vision dramatically limits understanding of the world. No other sense can stimulate curiosity, combine information, or invite

exploration in the same way, or as efficiently and fully as vision. In order to ensure an appropriate education, families and staff with special training must work together to bring the world of experiences to the child in a meaningful manner. It can be argued that teaching ECC skills would enable children with visual impairments to access the world beyond their fingertips.

Alberta Education (2006: 2) has stated that without vision, learners cannot access information beyond those things that they can touch or hear. Without this information, learners are unable to organise their environment or develop concepts that are important in understanding connections in their world. Learners who are visually-impaired need to access information through direct experiences and hands-on, tactile exploration facilitated by qualified professionals who can address these unique needs. Learners with visual impairments can and do succeed, but at different rates and often in different sequences. There must be significant intervention, coordinated by an educational team to ensure that appropriate development does occur. Expanded core curriculum is regarded as one of the significant interventions.

Hatlen (1996: 3) stated that the ECC is not new. Elements of it have been known as far back as 1891 and have since developed from one skill area to the current nine core areas.

Learners with visual impairments need additional skills in order for them to have access to the general curriculum (Ferrell & Spungin 2007: 14; Sapp & Hatlen 2010: 339). This view is echoed by Kalabula (2007: 37) who indicated that, in Zambia, visually-impaired learners require a supplementary curriculum dealing with activities for daily living, mobility and Braille. This curriculum is developed by teachers working in collaboration with curriculum specialists in visual impairments. Incorporating the teaching of these skills into a learner's programme, expands the concept of core curriculum. These disability-specific skills incorporated into programme planning are referred to as the ECC.

2.3.2 Components of Expanded Core Curriculum

The ECC has nine skill areas. Some sources of literature mention eight areas without including self-determination. In this study, nine areas are explored and discussed.

2.3.2.1 Compensatory or functional academic skills

The AFB (2013a: 2) stated that a distinction must be made between compensatory skills and functional skills. Compensatory skills are those needed by visually-impaired learners in order to access all areas of core curriculum. Mastery of compensatory skills usually means that visually-impaired learners have access to learning in a manner equal to that of sighted peers. Functional skills are the skills that learners with multiple disabilities learn that provide them with the opportunity to work, play, socialise and take care of personal needs to the highest level possible.

According to Hatlen (1996: 3), Alberta Education (2006: 13), Lohmeier (2005: 132) and Sapp and Hatlen (2010: 339), these are skills needed to access the regular curriculum presented in the regular classroom: compensatory skills are needed by learners to enhance their ability to participate in the home while functional skills are used in school and community as is an array of communication skills. Communication needs of learners with visual impairments will vary depending on the degree of functional vision, the effects of additional disabilities and the task to be done. Learners may communicate through braille, large print, print with the use of optical aids, regular print, tactile books, a calendar system, sign language, recorded materials or combinations of these means (Hatlen, 1996: 4; Lohmeier, 2005: 132). Examples of other compensatory or functional academic skill areas might include concept development, spatial awareness, keyboarding skills, listening skills, organisational skills, use of the abacus, or tactile discrimination skills

Goudiras, Papadopoulos, Koutsoklenis, Papageorgiou and Stergiou (2009: 114) found that most visually-impaired learners use more than one medium to read. For blind individuals, 10.2% used braille (alone) as their basic medium, 8.2% used screen-reading software, 30.6% cassettes, 14.3% combinations of braille and screen-reading software, 20.4% braille and cassettes and 8.2% screen-reading

software and cassettes. In all, braille was identified as a basic medium by 44.9%, screen-reading software by 30.7% and cassettes by 59.2%.

In a study conducted by Goudiras, et al. (2009: 115) for individuals with low vision, in all, braille was identified as the basic medium by 11.8%, screen-reading software by 21.7%, cassettes by 45.2%, lenses by 25.6%, large prints by 25.6%, screen-magnification software by 27.7% and CCTV by 4%'. These findings may imply that visually-impaired persons need to learn to access information through reading by using different media. For the visually-impaired learners to use these media, they need to be trained. Through the teaching of compensatory and functional skills as an area in ECC, visually-impaired learners are enabled to learn and compete with sighted peers in academic achievement.

The same study by Goudiras, et al. (2009: 115) explored the factors which might affect the choice of reading media, namely age, age and recency of onset of visual impairment, educational attainment, place of residence, and training in use of reading media. For example, training in computer use was found to be a significant individual predictor of frequency of screen-reading software use. Frequency of screen-reading software use was found to increase with the increase in training in computer use. Also, training in computer use is more common at the higher levels of educational attainment of the participant.

In terms of braille, the frequency of braille use declines with the increase in age of onset of visual impairment and the more recent the onset of the visual impairment (Goudiras, et al., 2009: 119). Further, frequency of braille use increases with an increase in training in braille. On the other hand, the frequency of braille use increases with educational attainment of the participant and whether they had received training in braille. In other words, those who become visually-impaired in later in life use braille less than those who lose sight earlier in life. With training in these skills, the visually-impaired can access information through braille and other assistive technologies. The relationship between training and ability to use a form of media for reading or other skills in ECC is important. It is one aspect which this study explores.

2.3.2.2 Orientation and mobility

It has been said that the two primary effects of blindness on the individual are communication and locomotion. The ECC must include emphasis on the fundamental need and basic right of visually-impaired persons to travel as independently as possible, enjoying and learning from the environment through which they are passing to the greatest extent possible (AFB, 2013a: 2). This is an area of instruction focusing on learners' ability to know where they are in relation to their environment and to travel safely, efficiently, purposefully and independently throughout this environment. Good orientation and mobility skills are highly correlated with the degree of independence achieved by learners later in life (McDonnall, 2011: 462). Developing body awareness, directionality, spatial awareness and practical knowledge associated with the characteristics of a given environment increases the probability that learners will be actively involved in age-appropriate activities with peers. Problem-solving strategies essential to travel in both familiar and unfamiliar environments, urban and rural areas and in various kinds of weather are essential to the development of independence and self-esteem. Learners who have low vision need to learn to interpret both visual and auditory information, and may require optical devices to access information. The use of a white cane is essential for some learners who cannot rely upon the accuracy of the visual information they receive or for those who are totally blind.

2.3.2.3 Social interaction skills

Wagner (2004: 4) explains that social competence, also called social skills, consists of skills that help people who are visually-impaired manage or cope with challenges in activities for daily living (ADLs), orientation and mobility, public encounters, personal affairs, and interactions with other people. These skills are essential if learners are to develop friendships with their classmates and participate in activities typically associated with school-age learners, whether educational or extracurricular. Having effective interpersonal communication skills is also highly correlated with employability in adults (Wolffe & Kelly, 2011: 347). For learners who are sighted, social skills are primarily learned incidentally through interaction with family members and peers.

Most of this learning occurs through observation, imitation and incidental experiences that are part of everyday routines. For learners who are visually-impaired, this information must be provided through timely, insightful, and sequential instruction. Information associated with non-verbal communication or cultural practices must be made available to learners who are visually-impaired. According to Wagner (2004: 1), for a person who is visually-impaired, social competence is a key component of a positive self-concept, higher self-esteem, more assertive behaviour and the ability to accept one's disability as a part of oneself.

2.3.2.4 Independent living skills and personal management skills

These skills are highly correlated with the achievement of lifelong goals for learners who are visually-impaired. Sapp and Hatlen (2010: 340) indicate that most activities of daily living, which sighted people perform without thinking, must be taught to learners with visual impairments – everything from personal hygiene and food preparation to financial management and organisational skills.

Curriculum designed to address the development of independent living skills includes instruction in such areas as personal hygiene, food preparation, money and time management, home management, and organisation of personal belongings and space to accommodate the lack of visual input. While similar skills may be taught within the public school curriculum, this does not provide sufficient opportunity for the meaningful and frequent practice required for learners who are visually-impaired. The content of the regular curriculum is often based on the assumption of the presence of a basic level of knowledge acquired incidentally through vision. Alberta Education (2006: 13) argues that skills in social interaction for learners who are visually-impaired cannot be learnt without direct, sequential instruction by knowledgeable people.

2.3.2.5 Recreation and leisure skills

According to Hatlen (1996: 4), many activities in physical education are excellent and appropriate for visually-impaired learners, but these learners also need to develop recreational and leisure activities that they can enjoy throughout their adult lives. These skills and experiences provide the same benefits for learners who are visually-impaired as they do for their peers who are sighted. However, without

modifications and/or specific instruction to master prerequisite skills, visually-impaired learners are frequently excluded from such activities.

Many of the motor skills learned during the rough-and-tumble play of childhood activities do not develop naturally in visually-impaired learners. Furthermore, if initial exposure to specific activities is cumbersome or their level of participation or success is below that of their peers, learners who are visually-impaired may become easily discouraged. The provision of specific, timely instruction and opportunities to practise newly-acquired skills will ensure learners derive pleasure from participation in an array of recreational and leisure activities.

2.3.2.6 Career and life management skills

One of the most critical periods in the life of a young person is the transition from school to the world of employment and to life as an adult. Developing independence, exploring interests, and pursuing employment or additional schooling are just some of the challenges faced by youths in transition from school to adult life. The AFB (2013a: 1) states that for youths with a disability, the transition into adulthood is compounded by complications related to their disability. Alberta Education (2006: 13) and Malakpa (2007: 1) found that employment statistics show that individuals who are visually-impaired are both underemployed and have unacceptably high rates of unemployment. This scenario is a wake-up call for professionals working with persons with visual impairments to seriously examine career education for learners in schools.

Career development process is expected to provide preparation for adult employment for all learners. Omede and Tenimu (2013: 346) state that choice of career for an individual is as important undertaking which is usually unpredictable. A chosen career is a life-long position which should be handled with uttermost care and consideration. Depending on the outcome, career choice has the capacity to make or shatter one's joy and sense of fulfilment. The traditional areas in career development include career awareness, exploration, preparation, and placement activities. For the learner who has no sight or only limited vision, the visual nature of traditional career education development presents numerous obstacles (Omede & Tenimu, 2013: 347). Since the majority of what we know about our surroundings is processed through the sense of sight, the loss of vision requires that experiences

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and concepts be systematically and sequentially taught to learners who do not have the benefit of learning through incidental observations.

According to Omede and Tenimu (2013: 347), career skills provide learners with information about the world of work, career options, and an overview of the skills necessary to be successfully employed. For learners who are visually-impaired, there are many additional programme components which need to be addressed. Besides learning on the types of career paths available life management skills include accommodations required to complete specific jobs, access to appropriate assistive technology, self-advocacy skills. Others life skill involve knowing on how to deal effectively with negative attitudes toward individuals with disabilities. Frequently, learners with visual impairments are unaware of the array of career options because they do not see the variety of workers in their environment or because adults around them are uninformed.

Shaw, Gold and Wolffe (2007: 9) proposed a career education model which suggests that visually-impaired youths be included in activities of daily living and summer work experience. This is said to go a long way in helping the learners with visual impairments to develop skills needed later in life to be independent and have successful careers.

Wolffe (1996) cited in AFB (2013b: 1) states that career education activities for learners with visual impairments should be future-oriented and directly interwoven throughout the school curriculum in partnership with learners' families. Functional academics, youth apprenticeships, cooperative education, and technology preparation are mentioned most frequently as critical components of a school-to-work transition system (US Departments of Education and Labor, 1994: 3). In addition, there are unique needs in five broad categories for learners with visual impairments: realistic feedback, high expectations, opportunities to work, compensatory skills, and exposure to visual input. In order to appropriately focus on ongoing career education needs, learners with visual impairments and their families must plan early.

Fostering appropriate attitudes, values, habits, and social relationships; providing occupational information and a variety of work experiences; and helping learners acquire independent living skills are equally important components in school-to-work

transition programs (AFB, 2013b: 2). Further career options by visually-impaired learners are limited compared to the real-life options that are available. The common jobs which are sought after include office work, customer service, information technology and social and educational work. It can be stated that without specific and timely intervention to address career development issues, learners who are visually-impaired encounter significant barriers to successful employment.

2.3.2.7 Assistive technology

Assistive technology (AT) refers to the mainly electronic tools that are designed to provide access to text and other learning materials and opportunities, and the support needed to learn to use the tools. Goudiras, et al. (2009: 111) and Gerber (2003: 540) stated that many professionals and researchers in the field of visual impairments understand that computer use and AT can make a significant difference in the lives of individuals with visual impairments – improving educational and employment opportunities, enhancing social networks, and facilitating independence.

Technology equalises the ability to access, store, and retrieve information between sighted people and those with visual impairments. Computers and assistive technology are frequently cited as the means to overcome the lack of access to information and other environmental barriers for non-print readers. This technology enables learners to access information, participate in age-appropriate activities, or complete a task independently or with minimal assistance (Kelly 2011: 236). Assistive technology includes video magnifiers, computers with braille input/output, braille embossers, software used to vary print size, large screen monitors, and talking calculators.

Instruction in the use of assistive technology begins in the preschool years and evolves as the needs of learners change. According to McDonnall and Crudden (2009: 337), mastery of assistive technology contributes to the development of literacy and academic success, social interaction among peers, independence and the potential of future employment.

A study by Kelly (2011: 235) showed that high school learners who are visually-impaired whose parents participated in any parent meetings, programmes, or training sessions for families of learners with disabilities were approximately 1.4

times more likely to use assistive technology than those whose parents were not involved. There was also a connection between high school learners with visual impairments who attended residential schools; they were approximately 1.8 times more likely to use assistive technology than those who did not attend such institutions. Parental support is one of the factors that influence success of learners with visual impairments be it in the academic area or employment after school.

2.3.2.8 Visual efficiency skills

These skills are used to accurately interpret visual information and complete visual tasks as efficiently and effectively as possible. Learners' ability to interpret visual information is affected by many variables. These may be type and severity of vision loss, cognitive ability, experiential knowledge and environmental factors, such as lighting (Alberta Education, 2006: 13). However, with comprehensive, systematic training and practice, most learners can learn to use their remaining vision more effectively and efficiently. Visual efficiency training may include blur interpretation, scanning and location skills, strategies to improve visual efficiency and strategies which enhance a given learner's access to visual information. Li (2003: 3) suggested a model on visual efficiency training. According to this model, visual efficiency training is an individual matter which calls for assessment of the visual abilities at the particular time. Adaptations are made to integrate different learning situations to enhance the learner's functionality.

2.3.2.9 Self-determination skills

Self-determination is more than social skills, and it is more than self-advocacy. For some learners, it might be as simple as indicating choices and preferences, and for others, as complicated as determining future careers. Self-determination has been described as "The ability to define and achieve goals based on a foundation of knowing and valuing oneself" (Field & Hoffman, 1994) cited in Texas School for the Blind and Visually-impaired (2008: 1). Some of the major components of self-determination are:

- knowledge of self and others;
- personal management;
- effective communication;

- self-advocacy and advocacy within systems;
- decision-making;
- goal setting; and
- problem solving.

Professionals in the field of visual impairment have realised that self-determination skills must be explicitly taught. Studies such as those done by Sacks, Wolffe and Tierney (1998) and Sacks, et al. (2006) cited in Agran, Hong and Blankenship (2007: 445) have confirmed that learners with disabilities are often unable to advocate for their own needs, wants and desires and are less prepared to make the hard choices and decisions needed to take control of their own lives and become self-determined adults. Therefore, they need to be offered the instruction, encouragement and experiences that will allow them to become as self-determined as possible. People who are self-determined purposefully cause things to happen in their lives.

This area in the ECC is quite new. Sapp and Hatlen (2010: 341) defined it as a person's right to decide freely and without undue influence how he or she wishes to live his or her life. To develop self-determination skills, children or adolescents who are visually-impaired must be provided with the necessary knowledge and experience. They must learn which choices are available to them, have the skills necessary to take advantage of these choices, and be given opportunities to make age-appropriate choices for themselves. To do so, they often need direct instruction in learning to evaluate options and in making choices.

2.3.3 Delivery of Expanded Core Curriculum

According to Sapp and Hatlen (2010: 338), teachers of visually-impaired learners have for a long time known that they need more skills than simple reading, writing and mathematics.

A study by Brown and Beamish (2012: 86) ascertained that teachers of visually-impaired learners ranked ECC as most important area and most frequently taught. To further emphasise the need to teach ECC skills to visually-impaired learners, McDonough, Sticken and Haak (2006: 596) have stated that these learners need additional knowledge and skills to have equal access to the standard curriculum with

their sighted peers. Further, high-quality education for visually-impaired learners can be ensured if the ECC is recognised as a necessary part of education for the visually-impaired. The nine areas of the ECC just discussed above should not be viewed as a separate curriculum. The ECC must be delivered together with the core curriculum. Although most of the skills of the ECC are reflected in the core curriculum, they need to be taught to the visually-impaired in a systematic manner.

Provision of education for visually-impaired learners should not be viewed as doing a favour for these learners but rather that these learners have a right to an education. Education is a right and it is held by all whether sighted or without sight. Equality of access to education for all is acknowledged by the United Nations (UN) which, through the CRPD, state that persons with disabilities should not be excluded from the general education system on the basis of disability, and that children with disabilities should not be excluded from free and compulsory primary education, or from secondary education, on the basis of disability (UN, 2006: 17). Teaching visually-impaired learners skills identified in ECC can be one way of ensuring equality of access to education and community life.

However, these additional skills above the ordinary curriculum have not been taught to the learners in a complete manner. As far back as 1829, Samuel Howe, who established the first school for the blind in the United States, indicated that visually-impaired learners should follow the ordinary curriculum but also be taught on the basis of their abilities and interest (Sapp & Hatlen, 2010: 338).

Research by Lohmeier (2005: 128) on what was taught in the ECC, found that the most frequently taught areas were recreation and leisure, orientation and mobility, and career education and the least-taught areas included social interaction and visual efficiency. These findings are similar the findings of Lohmeier, et al. (2009b: 108) where teachers of the visually-impaired and, orientation and mobility specialists indicated that technology, social interaction and, orientation and mobility were most prevalent while recreational and leisure skills, self-determination and visual efficiency were least taught to the learners.

Further, Wolffe and Kelly (2011: 344) found that there were differences in terms of skills learners with a low vision and the blind received. They found that 49% of those with low vision received orientation and mobility while 53% of the blind received

orientation and mobility; 57% received and used assistive technology services or devices assistive technology, such as voice synthesizers or software to enlarge the size of print on the computer screen, while 70% of those who are blind received assistive technology services or devices; and only 39% used assistive technology, such as voice synthesizers or screen-enlargement software. In addition, 29% of low vision learners received career counselling (that is, help in finding a job, training in job skills, or vocational education) while for the blind it was 24%. These finding indicate that within the category of visual impairment, there are variations in the way skills are taught. The picture in the above study is that skills are taught differently and so is the application or use by the learners themselves.

The findings in the studies indicated above gives a scenario that within the ECC, some areas are given more priority than others. By choosing to teach some areas and leave out others, teachers of the visually-impaired are limiting the learners' horizons of self-development. Learners' access to the core curriculum is, to a large extent, limited by the skills which they have. It may be argued that learners are equally deprived of skills and knowledge to widen career choices, education attainment and levels of inclusion in society. However, teachers of visually-impaired learners have indicated or given reasons to explain why some areas are viewed to be more important than others. These are addressed under the challenges in implementing ECC discussed later.

Educating the visually-impaired is not easy and a collaborative approach is recommended. A survey by Lohmeier, et al. (2009b: 107) indicated that 37.5% of the parents thought that their children were not receiving appropriate instructions in ECC and 11% did not know whether the children were instructed in these skills. Instruction, regardless of setting, must be provided by professionals thoroughly prepared and qualified to teach learners with visual impairments. Visually-impaired learners should have teach teams who work together to plan, implement, monitor and evaluate programming and services (Alberta Education, 2006: 3). A certificated teacher must direct and lead the learning team in developing goals and objectives that are educationally relevant. According to the AFB (2013c: 2), the skills and knowledge needed by these staff can be defined with three classifications. Firstly, the teacher must have a foundation in regular education, including methodology in

teaching reading, mathematics, and other areas of subject matter. Secondly, the teacher must learn the techniques for curriculum adaptation for visual learning experiences so that the concepts taught remain the same with adapted teaching methodology and materials. Thirdly, the teacher must know how to assess skills and deliver instruction in the specialised areas of independent living skills, social skills, career education, and specific areas of academics.

The combination of knowledge and skills needed in order to provide appropriate educational services to learners who are visually-impaired requires intensive preparation in a teacher training program.

Members of the learning team include classroom teachers, parents, administrators, teachers trained in educating learners who are blind or visually-impaired (specialised teachers), orientation and mobility instructors, other professionals involved with assessment and/or programming. Additional members are added to the learning team as needed. These may include professionals such as occupational therapists, physiotherapists, school psychologists, behaviour specialists, career counsellors, adapted physical education specialists, or assistive technology consultants. It is important that roles and responsibilities of learning team members are clearly identified in the student's individualised programme plan.

Lohmeier (2008: 33) and Sapp and Hatlen (2010: 339) indicate that the ECC should be taught by qualified teachers of the visually-impaired as well as orientation and mobility specialists. Parents may also be involved but should not take over the responsibility of professionals. Parents of children who are blind or visually-impaired need critical information to fulfill their natural role as their child's best and only lifetime advocate. They should not only be encouraged to participate in the educational process, but the key roles they must play if their children are going to reach their full potential and their maximum level of independence must be clearly stipulated. AFB (2013c: 2) suggests that quality parent education on an ongoing basis would provide the tools for parents to understand their child's individual needs and how those needs can best be met in both the home and school environments.

In a study to find out the role of paraeducators in the education of the visually-impaired learners, Lewis and Mackenzie (2009: 482) found that paraeducators have an important role. About 37% of the paraeducators said that they were training

learners in both ECC and academic areas. Paraeducators in residential schools were more involved in supervising learners in self-care skills as well as modification of teaching and learning resources. Another responsibility paraeducators had was to be liaison officers between the school and parents (Lewis & McKenzie, 2009: 470). The challenge is that these people do not have training but offer direct instruction in ECC areas such braille, independent living, assistive technology and mobility. Therefore, the less qualified paraeducators are providing skills to the learners with visual impairments. The training they received was general but with demonstration from teachers of the visually-impaired learners, paraeducators learnt skills in ECC and in turn offered skills to the learners. This scenario may impact on the quality of training visually-impaired learners get in ECC. In as much as paraeducators need to collaborate with the teachers of the visually-impaired learners, the level may be limited. However, it should be noted that paraeducators play a critical role in provision of service to the visually-impaired learners.

According to Brown and Beamish (2012: 85) the roles of teachers in the education of the visually-impaired learners are changing. In this survey, it was found that teachers of the visually-impaired have four major roles: supporting learners and administration, teaching ECC, collaborating with the general education teacher, and ensuring that visually-impaired learners have access to the curriculum. These multifaceted roles have implications for the workload of teachers, accountability and quality of instruction. In as much as teachers would want to concentrate on the ECC, other responsibilities take up their time. With such a change in the roles of teachers of the visually-impaired, a way to balance additional responsibilities and teaching is necessary. It may be assumed here that teachers of visually-impaired learners would deliver better if they collaborated with other professionals and focused on teaching alone.

An instruction in ECC is a long-term process that requires certified teachers of the visually-impaired as well as a supportive community (Lohmeier, 2005: 127). With good instruction in ECC the visually-impaired are accorded an opportunity to acquire skills that they need to lead a successful life.

2.4 CHALLENGES IN IMPLEMENTING EXPANDED CORE CURRICULUM

According to Wolffe and Kelly (2011: 340) there is a general agreement that areas of the ECC are important. However, teachers and advocates continued to debate how to accomplish the task, given the time constraints of the school day and determining which staff is responsible for teaching which elements of the ECC.

2.4.1 Time Constraints

A study conducted by Lohmeier, et al (2009b: 107) established that parents of children with visual impairments understood that time was a restraining factor in the teaching of ECC by teachers and orientation and mobility specialists. Professionals indicated that they struggle with technique and time to teach the ECC areas. A study by Brown and Beamish (2012: 87) showed that teachers of learners with visual impairments identified time as a difficulty factor. Blending time to teach and support the learners and administration was a challenge.

The experience of many teachers is that there is never enough time to complete what they need to do. There is increasing concern, however, that learners are not receiving the intensity of services needed, particularly in the primary grades, to provide them with the skills (including braille, daily living, and social skills) necessary to be successfully integrated in school. Because learners are expected to learn the core curriculum and meet graduation requirements, it is very difficult to provide these additional specialised skills when the learner is fully included, particularly in a time when specialised support services have been reduced because of funding cuts and teacher shortages (AFB, 2013b: 2). Insufficient time may affect teacher's well-being, stress and capacity to support visually-impaired learners in inclusion and liaison time is limited. Lack of time impact on the quality of instruction. Teachers may rush through lessons or may not teach all areas of ECC. This could explain in part, why some areas in ECC are taught while others are given less time and priority. Agran, et al (2007: 459) found that 37% of teachers were not teaching self-determination due to time constraints while 51% felt that there were more important areas than self-determination. Another 38% said they were not aware of available curricular or

assessment materials in this area. This finding shows how teachers have to make decisions on what to emphasise when delivering ECC due to time available.

Equally important are the views of other professionals in education of the visually-impaired on the issue of time to deliver the curriculum. Orientation and mobility specialists are knowledgeable about ECC and believe that ECC is an important area for the success of the visually-impaired but they do not provide adequate instruction and seem to have no time to teach it (Lohmeier, et al., 2009a: 107; Sapp & Hatlen, 2010: 343). Further, Agran, et al. (2007: 458) established through surveys that specialists in visual impairments and orientation and mobility specialists do not have enough time to teach self-determination skills, while Wolffe, Sacks, Corn, Erin, Huebner and & Lewis (2002: 294) found that most teachers spend their time on compensatory and academic skills and only little time allocated to other areas in ECC.

Another challenge was the lack of time tabling of the ECC. The time teacher spent on ECC was unplanned and unstructured, which limited instructional effectiveness. Lohmeier (2005: 129) alluded to the point that most of these skills (71%) in ECC are taught during normal school day. However, specialised schools go beyond the school day hours to maximize on time of instruction but instructions can be given throughout the day including life experiences. The implementation of ECC is not easy and requires time to be allocated to teaching these skills and the learners need time to learn.

2.4.2 Lack of Specialised Personnel

Every programme requires qualified staff for effective implementation. Alberta Education (2006: 2) stipulates that if learners with visual impairments are going to access any programme, they need to be instructed in disability-specific skills. Training in skills is supposed to be offered by well-qualified professionals such as teachers. The trained personnel are expected to offer hands-on experiences and tactile explorations to enable learners to have direct access to information. Regrettably, the education of visually-impaired learners generally lacks qualified personnel in the various fields or disciplines like academic, vocational and technical

skills. Sapp and Hatlen (2010: 344) and Boame (2009: 4) found that current training of teachers of learners with visual impairments focused on training in ECC along with the other curriculum. This approach was found to be defective in that graduates did not feel confident to offer skills in ECC. Equally teacher trainers felt that they did not have enough time to train graduates in ECC. Personnel preparation is quite important. Teachers without skills in ECC will most likely not transfer the skills which they do not have. Zhou, Parker, Smith and Griffin (2011: 197) have shown that many teachers had significant deficits in assistive technology use for the visually-impaired. With 55 (74.32%) of the 74 assistive technology competencies that were examined, 57.5% of teachers lacked adequate confidence with using assistive technology for teaching. The study further recommended that assistive technology for learners be embedded in university training for teachers. The study proposed that personnel preparation, baseline skills in teacher training in ECC and professional self-improvement of ECC are key to successful implementation of ECC. In another study by Papadopoulos and Goudiras (2005: 75), teachers reported that one barrier to ECC implementation was deficiencies in teacher skills. This challenge was by reported by 67% of the respondents. It was strongly felt by participants that there was a need for further development of teachers' skills through ongoing teacher training.

2.4.3 Inadequate Teaching and Learning Resources

The important role of materials and equipment in any academic undertaking cannot be overstressed as learners and teachers cannot do without them. For learners with visual impairments, specialised materials and equipment are very important because the items almost act like a replacement for lost eyesight (Omede, 2015: 131). Equipment such as recorded audio materials, talking books, optical aids, optacon, braillers and computers are essential for educational attainment. These educational items are not easy to come by and the available ones are grossly inadequate to meet educational requirements (Omede, 2015: 131). Zhou, Ajuwon, Smith, Griffin-Shirley, Parker and Okungu (2012: 663) established that most universities have not incorporated the use of assistive technology mainly because the equipment and aids are in short supply. It is difficult to envisage effective teaching and learning as well as

maintain a quality-driven educational system to take place successfully without resources. The lack of teaching and learning materials jeopardize teacher training and consequently delivery of lessons in schools. Teacher training institutions equally lacked textbooks in the specific areas of ECC. One reason to explain the inadequacies in teaching and learning resources was lack of funding to purchase or update existing one. Nimmo (2008: 35) stated that materials for learners with visual impairments were very costly and funding was usually insufficient to buy most of the resources. Lack of resources and equipment in teaching ECC was also cited by participants in a study done by Brown and Beamish (2012: 88) where it was mentioned that lack of teaching and learning resources was the biggest need in delivery of instruction for learners. Malakpa (2007: 54) indicated that a lack of specialised resources can be explained to emanate generally from under-funding by the government to purchase materials.

The role of government in the provision of teaching and learning resources has been documented several times. In a study conducted by Korir (2015: 10), the majority of teachers attested to the fact that it was the responsibility of government to provide teaching resources to support programmes. Furthermore, teachers indicated that there was little being done to support the programme. Equally school administrators stated that the purchasing of teaching and learning materials for them was expensive and the government did not offer any financial support for the programme.

2.4.4 Negative Attitudes

Attitude embodies beliefs, emotions and behaviour. All these characterise human beings in intra-personal and in social interactions. Omede (2015: 131) argues that generally if the attitude of the public towards persons with visual impairments is positive, more enlightened treatment is ensured while if the attitude is negative the opposite is the situation.

Attitudinal barriers to the implementation of ECC have been documented. Bishop and Rhind (2011: 178) state that negative attitudes of key stakeholders in the education of persons with disabilities has a detrimental impact. Historically, the general attitude of society towards persons with visual impairments has had negative

connotations. There was a social stigma, an attribute which impedes their social and economic welfare (Korir, 2015: 7). This attitude equally affects the way parents view their children and the levels of support they offer.

In the case of parents, the expectations of the education system are very high about their contribution. Parents are expected to offer significant support and counsel to their children but sometimes they seem discouraged and transfer the same to their children. When this happens, then the future of learners hangs in balance. Parents and families were reported to have low expectations of their children and failed to encourage and support them emotionally and financially. In institutional settings, negative attitudes spread across the entire education system from preschool to tertiary education resulting in learners finding it difficult to cope (Borland & James 1999, cited in Bishop & Rhind, 2011: 178). The attitudes of various members in an institution such as a school weigh heavily on the successful delivery of ECC. Teacher attitudes are important in educational system, particularly in the classroom. Attitudes impact how teachers communicate with learners as well as how curricular decisions are determined in the classroom (Alquraini, 2011: 152; Logan & Wimer, 2013: 3). Lack of support by fellow teachers and school administrators are barriers to effective implementation of ECC. With unfavourable attitudes within institutions, provision of time and resources for ECC is greatly compromised.

Learners have been said to possess behaviour and attitudes that did not promote learning of ECC. Korir (2015: 7) states that learners with visual impairments have the internal self-construct, which makes them have a certain psychological sensitivity about what other peoples' attitudes are towards them. This becomes part of the personality of learners and has generally influenced the way learners with visual impairments behave towards their sighted counterparts. This relationship in terms of attitudes influences the way learners with visual impairments accept or reject instruction which is disability-specific.

2.4.5 Curriculum Shortfalls

One concern in curriculum development and implementation is the lack of understanding of the interface between ECC and core curriculum (Nimmo, 2008: 33).

In Nimmo's study, teachers did not realise the importance of ECC in relation to accessing the core curriculum. Lack of understanding had detrimental effects and contributed to the perception that ECC was a burden to the teachers. Rather than view ECC as a burden, teachers should include different teaching strategies for the individual needs of the learners in the classroom of the school as a whole. Blending the core and ECC has been a challenge for many learners. To this effect, teachers should adapt the curriculum according the special children's needs and abilities and use instructional strategies that make best use of the child's abilities and interests (Abbas, Tayyaba & Naz, 2016: 48). For learners with visual impairments, most curriculum frameworks are not clear about the specific skills and schedules for teaching (MoE, 2013: 21). Equally deficits in curriculum are recognised at teacher training levels. Deficits in curriculum limit or discourage teachers from devising measures to ensure effective delivery because they lack clear guidelines. According to Al-Natour, Amr, Al- Zboon and Alkhamra (2015: 73) teachers were racing against the loaded curriculum which needed to be covered. With examinations programmed against the curriculum, teachers were unable to balance their teaching of the core curriculum and ECC.

2.4.6 Assessment

Scholars such as Sapp and Hatlen (2010: 343) have argued that it is not enough for teachers to know the deficits of learners. Teachers need to be proficient in assessment as well. Assessment for learners with visual impairments is supposed to be done in areas such in learning media assessment, functional vision assessment, assistive technology, orientation and mobility (Alberta Education, 2006: 4). Teachers and orientation and mobility specialists routinely assess learners in ECC and ensure programmes are on course. However, many teachers who are knowledgeable about ECC assessment are overwhelmed with other responsibilities. Without properly establishing the needs of learners, intervention programmes may not be most effective. In a study conducted by Brown and Beamish (2012: 87), it was found that a lack of assessment and referral systems in ECC affected delivery. Teachers did not have enough support within the field of ECC and failed to collaborate in offering assessment. They experienced isolation.

2.4.7 Lack of Awareness on the Needs of Learners with Visual Impairments

Many teachers in schools and community members do not appreciate the effects of vision loss and the various needs of the affected individual. According to Nimmo (2008: 32), teachers tend to generalise disability effects. Some teachers fail to recognise that learners with visual impairments are unique or are simply unwilling to take up the responsibility of teaching ECC skills. This was confirmed in a study conducted by Brown and Beamish (2012: 87) where it was found that teachers were experiencing challenges with teaching ECC skills because the staff in the school did not appreciate the learners, or even the effort special teachers put in to come up with programmes and activities. For ECC instruction to be effective, teachers need to explain the importance of ECC to administrators, parents and other professionals. The input of these stakeholders is critical. Without sensitisation, parents may not contribute or realise their critical responsibility in teaching ECC skill to their child (Sapp & Hatlen, 2010: 345). The teacher's attitude towards education of learners is built partly as a result of their information and knowledge about special needs education. Abbas, et al. (2016: 48) postulated that teachers who possess enough knowledge about disabilities tend to exhibit optimistic attitude and those who have insufficient knowledge are indifferent.

Lack of awareness had also contributed to isolation of persons with visual impairments in other sectors such as employment. Webson (1997: 23) argues that despite advances in technology and new approaches, most people with visual impairments continue to live on the fringes of society. They have remained in the category of needy people in society. Although this has a historical background, there is need to de-mystify blindness through greater understanding and integration. Sensitisation is key to overcoming some of the challenges.

2.4.8 Insufficient collaboration

The idea of collaboration is highly recognised and cherished, but in it does not always work. Collaboration in teaching learners with visual impairments has been found to be beneficial. Among the positive outcomes is that possessing collaboration

skills may support the induction and retention of special educators in the field (Hamilton-Jones & Vail 2014: 77). Learning teams are an essential strategy in the education of learners with visual impairments. A learning team includes specialised teachers, class teachers, parents, administrators, orientation and mobility specialist and other professionals. Learning teams plan, implement, monitor and evaluate programmes for learners (Alberta Education, 2006: 3). An important component in collaboration is parental involvement. Parents influence every aspect of the child's education hence the need to clearly state their role as collaborators. The bigger picture of parental involvement is where the family becomes directly involved in teaching some ECC skills at home. Research by Ncube and Hlatywayo (2014: 76) has established that parents and guardians have little involvement in curricular and classroom practices beyond enrolling their children in schools. Their involvement need serious guidance sometimes in form of legislation.

Without learning teams, implementation of ECC lacks credibility and impetus. Alberta Education (2006: 3) indicates that teachers who specialise in teaching learners with visual impairments must take the lead in forming learning teams for learners and also planning for transitioning of learners. However, collaboration faces various challenges and constraints that limit the implementation of programmes. A study by Hamilton-Jones and Vail (2014: 81) established that the most prominent challenges were power relations, one teach-one assist theory, and lack of school-wide recognition of collaboration. Equally, Al-Natour, et al. (2015: 65) reported that barriers to collaboration include imperfect relationships among professionals, lack of cooperation and disagreement among them regarding best strategies and forms of action. In terms of problems with power relations, specialist teachers mentioned that there were power struggles in teams and that the general education teachers felt threatened by the presence of specialists. Anxiety and apprehension about who the boss would be arose. Another challenge cited by teachers was failure by teaching teams to perceive and appreciate each other's unique and complementary roles. Instead, teachers behaved like one was the teacher while other members were assistants. Collaboration has had challenges due to lack of recognition in school systems. The collaborative efforts of teachers and other staff are not recognised and appreciated by the school-wide community.

Teachers of learners with visual impairments who feel well-prepared for the complexities of collaboration may find their work less demanding if collaboration skills were good (Hamilton-Jones & Vail 2014: 77). The assumption is that most teachers shun teaching special learners because they do not know how to work with other professionals and by so doing they are unable to cope with the demands of special needs. However, teachers have not demonstrated good skills in working with other professionals. Researchers have blamed teacher training for the shortfall in collaboration skills. According to Hamilton-Jones and Vail (2014: 77), teacher education programmes fail to equip special educators with the unique skills necessary for co-teaching alongside other professionals. Colleges and universities have been accused of not giving enough demonstration in collaborative strategies for teachers during training. Another perceived weakness of the teacher training is that the programmes offered often perpetuate the phenomena of segregated disciplinary roles and isolated practice. There is less emphasis on blending roles but each professional focuses on his or her skills and works in isolation.

Teachers have blamed their lack of collaboration on the workload in schools. Teachers reported being too overwhelmed with many other responsibilities and lack time to coordinate teams (Al-Natour et al., 2015: 67-73). The high number of classes allocated to each teacher seems to be a big obstacle that hinders collaboration between them. Collaboration between professionals was limited in scope and frequency. This was confirmed by teachers themselves who expressed their dissatisfaction with the frequency of collaboration and said it needed improvement (Lewis & McKenzie, 2010: 470). Equally interesting, teachers often left the task of collaboration in the hands of paraeducators who in many instances have limited skills to coordinate meetings and activities with other stakeholders.

2.4.9 Lack of Employability

Everyone has the right to work and live a decent life. Concerns about low employment levels among young people with visual impairments began as early as 1840 at the Perkins School for the Blind where specialised programmes to improve transition from school to work were implemented (Cavenaugh & Giesen, 2012: 401). Visually-impaired people are, however, discriminated against in terms of employment

even though they may have requisite skills comparable to those of sighted people. This discrimination has narrowed their avenues to employment (Boame, 2009: 7). The International Labour Organisation (ILO, 2011: 1) has indicated that excluding disabled people from the world of work may cost countries 1 to 7% of Gross Domestic Product.

In a longitudinal study that was conducted in United States of America, McDonnall (2011: 463) found that there is a substantial gap in employment rates between youth with visual impairments and sighted ones. He discovered that 19.8% of youth with visual impairments aged 16-19 were employed compared with 29.2% of the same age youths who are sighted; the gap is even wider for those youths aged 20-24 where it is 39.5% against 63.8%. This gap is a matter of concern and could indicate deficits in the way visually-impaired learners' transition from one stage of life to another is handled. According to the Department of Education (2007: 4), this calls for thoughtful assessment and collaboration by partners. Identification of community agencies who may be in a position to support, fund, or sponsor transportation is essential.

In a study by Shaw, et al. (2007: 15), visually-impaired youth indicated that they face barriers to successful employment. This problem is a world-wide challenge which is attributable to a variety of impeding factors, including a myriad of myths and misconceptions about disabilities in general and blindness in particular. The visually-impaired, like any other group in the age of technology, need technological devices and equipment suitably adapted to their situation. Unfortunately, specialised services that provide assistive equipment and devices (including computers with screen readers, screen magnification features, and/or braille outputs) are woefully and consistently under-funded. Malakpa (2007: 2) established that this was a major impediment to job acquisition and retention because these devices are helpful in enabling the blind and visually-impaired to perform their jobs effectively and efficiently. For example, about 40% of people with severe visual impairments use computers to perform their jobs.

In one study by Capella-McDonnall (2005: 12), the participants reported that attitudes of employers were not positive especially those who had never employed a person with a disability. They also reported that limited resources were supplied for

their use, such as Braille materials or assistive technology. Employers' negative attitudes towards the visually-impaired is also related to low employment levels. Persons who are blind are perceived by many to be difficult to place, which would provide another disincentive to working with this population. They are also more likely to require expensive resources, such as assistive technology. A study by McDonnall, Zhou and Crudden (2013: 17) showed that 83.6% of the participants who were vocational rehabilitation staff indicated that employers had a more negative attitude to hiring a visually-impaired person for a specific job than another with other disabilities.

Other professionals such as rehabilitation providers have identified pervasive barriers to achieving competitive employment outcomes for people who are blind or visually-impaired. These barriers include negative attitudes toward visual impairment and persons who are visually-impaired and have transportation issues which may include orientation and mobility (Crudden, Sansing & Butler, 2005: 2). Other reported employment barriers include the lack of job-readiness skills, lack of access to print and problems within the rehabilitation system. Lack of job readiness skills mirrored into inadequate transition planning by teams of partners.

Other challenges are job requirements that visually-impaired persons may not have by virtue of being visually-impaired. Some jobs require that the applicant possesses a driver's license. Transportation has also been pointed out as a challenge in job search. Workplaces which are very far away from home may be difficult to reach for people who do not have their own means of transportation. In a study conducted by McDonnall (2011: 462), transportation was identified as one of the predictors of employability. Those with good transport plan had a greater chance of getting employed than those who did not have. Independent travel by visually-impaired people was a factor in employability. An independent traveller exhibited independence in many areas of life, too (Crudden, et al., 2005: 2). Social skills and independent travel are important for the success of visually-impaired learners and especially future employment. Another finding in the study by McDonnall was the relationship between social skills and employment opportunities. It was established that unemployed college graduates with visual impairments have fewer social networks than employed graduates who are visually-impaired. Cavenaugh and

Giesen (2012: 408) equally indicated that training in social skills was found to enhance verbal skills in job interview situations.

Further, most visually-impaired persons got their jobs through a network of their acquaintances and not their families. These findings indicate that social skills may open doors to connections for a visually-impaired person. This is so because families generally have lower expectations about the achievements of their children. Overprotective families hide children from the outside world which is very harmful. In some ways, parents indirectly impart false hopes to their children but also neglect the children's immediate need for special intervention, which could enhance their employability in future (Ng Lee, Abdullah & Mey, 2011: 112). However, it must be stated here that family plays the most influential role in one's career development. According to Omede and Tenimu (2013: 346), this aspect need not be emphasised but it is well-researched and documented.

Ng Lee, et al. (2011: 115) found that persons with disabilities were more vulnerable to psychological problems. Issues such as poor self-concept and self-esteem could prevent them from seeking employment. Moreover, people with disabilities have been aware of the potential discrimination in education, training, and employment. Such insecure feelings foster a sense of self-limiting conservatism which later may negatively influence their career ambitions and occupation. Teaching ECC skills such as self-determination and social skills would help learners with visual impairments to deal with such matters.

2.5 CHAPTER SUMMARY

In order for learners with visual impairments to access the core curriculum, they need additional skills called ECC. It must be stated here that, without vision, subjects in the core curriculum are almost impossible to access. The delivery of ECC is one of the critical issues in the education of the visually-impaired. It is generally agreed that educating the visually-impaired take a multi-professional approach. The ECC is a tool for equalisation of opportunities in all areas of life and also a way of inclusion of the visually-impaired. Besides this, education is a human right which the visually-impaired must enjoy. The teaching of ECC skills has challenges which need to be

addressed. Among these is inadequate time to fully teach the skills alongside core curriculum.

CHAPTER 3

SUPPORT STRATEGIES FOR IMPLEMENTING EXPANDED CORE CURRICULUM

3.1 INTRODUCTION

Despite challenges encountered in the implementation of ECC, not all hope is lost as there are suggested ways to minimize some of the challenges. Strategies for implementing ECC are examined to try and suggest what can be workable. The final part of the chapter presents literature on the impact of ECC on the life of a visually-impaired person. The areas of focus are academic achievement, employment, communication and social inclusion as well as economic empowerment. The main idea here is that when ECC skills are mastered, there is evidence that visually-impaired persons would excel in school and there are higher chances of getting employed or become self-employed. Besides it is a known matter that education has both economic and social returns. Therefore a visually-impaired person with an education gains just like their sighted counterparts, becoming empowered to make positive contributions to national development.

3.2 SUGGESTED STRATEGIES FOR IMPLEMENTING ECC

Many professionals in the education of the visually-impaired have made suggestions on ways to teach skills in ECC. In a survey by Lohmeier, et al. (2009b: 109), most professionals indicated that they did not know the best ways of implementing ECC. Some strategies suggested by professionals are discussed here.

3.2.1 Improve Personnel Preparation

Sapp and Hatlen (2010: 344) proposed this approach pertaining to teacher training for ECC teaching. First, personnel preparation programmes must provide adequate instruction, so their graduates are able to meet learners' ECC needs. Second, the field of visual impairment should create baseline standards for what first-year teachers need to know about the ECC. Third, professionals must take responsibility for continually improving their own instructional skills in relation to the ECC. Personnel preparation programmes must provide adequate instruction in the ECC at

the pre-service level. Teachers who are entering the field should have adequate skills. The AFB (2010: 4) proposes that every teacher training programme must offer knowledge and skill in three categories. The skills and knowledge needed by staff can classified as follows: in the first instance, the teacher must have a foundation in regular education, including methodology in teaching reading, mathematics, and other areas of subject matter. In other words, teaching in the core curriculum is proposed. The second component in training should include understanding and practical skills in curriculum adaptation. The teacher must be empowered with the techniques for curriculum adaptation, as much as possible maintaining visual learning experiences so that the concepts taught remain the same with adapted teaching methodology and materials. The third proposed aspect to teachers' training is that a teacher must know how to assess skills and deliver instruction in the expanded core curriculum. The specialised areas such as independent living skills, social skills, career education, and functional academic skills are crucial. Lohmeier (2005: 131) argued that these skills enable learners to access the core curriculum and become independent members of the community.

Zhou, et al. (2011: 208) proposed that the gap in knowledge in an area such as assistive technology among practising teachers of learners with visual impairments, can be narrowed by training them at in-service level, thereby providing teachers with adequate hands-on experiences with assistive technology devices. The study found that the lack of knowledge or skills occurred mainly in the following areas: braille literacy and its application in providing assistive services; assistive technology for learners with multiple disabilities; prescribing assistive technology devices; strategies for teaching specific aspects of assistive technology to learners who are visually-impaired, such as assistive technology-related concepts and motor skills. Others are recommending and using assistive technology; and teaching learners to access information and the Internet.

One way of improving skills in personnel as well as increasing numbers of teachers of the visually-impaired learners is through intensive, face-to-face instruction, coupled with Web-based learning. According to Ajuwon and Craig (2007: 12), these methods provide personnel with the requisite skills to meet the needs of children with visual impairments in their classrooms.

Teachers in the study by Zhou, et al. (2011: 205) seemed to lack information to give to the learners and other collaborators. The deficits were noted in knowledge of funding mechanisms, training resources, supportive agencies, manufacturers and vendors of assistive technology, skills to help families obtain assistive technology. These findings suggest that teachers, if not well-trained, will have low confidence levels and skills to collaborate with, teach and guide parents.

3.2.2. After-School and Summer Programmes

Some researchers suggested summer programmes and after-school instruction as ways to go in teaching ECC especially if time constraints were a factor in implementing the ECC (AFB, 2010: 1). These activities are arranged to take place during holidays and some can be after learners have knocked off from their schools. After-school programmes give learners an opportunity to cement skills in the expanded core curriculum. For learners with special needs, after-school programmes can provide supplemental educational programmes that can be tailored to meet learners' needs and give them a better chance to reach their full potential. After-school programmes also provide a level of individualised attention that learners might not receive during the school day.

According to Lohmeier (2005: 6), instruction in each of the learning areas should also occur during alternate learning times when learning can be derived from everyday experiences. The most effective learning is the result of frequent instruction during times when a skill can be functionally applied. This application is skill-specific. For example, independent living skills and orientation and mobility can be taught in home environments and out in the community where the learner lives. An extended acquisition of ECC skills after school can be facilitated by other people like parents or siblings. According to Koenig and Holbrook (2000) cited in Trief and Feeney (2003: 138), instruction after school hours should not be limited to some ECC areas such as social interaction, recreation and leisure, and independent living development. It should cover all areas in order to give learners rich and wider experiences. Other areas which can be covered during summer-school programmes include work readiness skills such as job hunting, career information, work experience and transition planning.

After-school or summer programmes can be conducted in college and university a well. In these institutions, learners can be given skills such as time management, library use and note taking. Mc Broom (1997) cited in Trief and Feeney (2003: 138) indicated that colleges and universities can help visually-impaired learners become successful by complementing ECC skills the learners may have by using strategies like giving alternative tests rather than those given to sighted learners, use of tutors, provision of reader services where visually-impaired learners have material read to them, making orientation and mobility assistance available to learners and use of adaptive technology. At college or university level adaptive technology, such as personal computers, screen readers and other assistive devices can be an equaliser for opportunities for the visually-impaired. Assistive devices are helpful in academic research and writing. Learners can conduct on-line research and work on assignments and tests using computers, internet and screen readers, and be able to produce their work in media. Sighted lecturers can assess their work without seeking translation.

The training programmes can be executed during college vacations. In terms of who conducts programmes for the learners, Trief and Feeney (2003: 138) suggest a collaborative approach between the school or college and other agencies providing services for the visually-impaired. The agencies can provide specific skills such as orientation and mobility, assistive technology and self-determination while the school can mentor learners in note making, time management, study skills, social skills and use of library resources.

3.2.3 Aligning ECC in the Core Curriculum

Lohmeier (2007: 34) and Lohmeier (2009: 108) proposed that ordinary teachers and ECC specialists should collaborate and incorporate ECC into the core curriculum timetabling. In this model, all areas of ECC are aligned and addressed in the academic areas. Sapp and Hatlen (2010: 344) suggest that incorporating the ECC into a learner's typical day can be challenging, but it is feasible. Many ECC skills can be embedded in the general education curriculum. There are strong commonalities in terms of concepts in ECC and general curriculum. Lohmeier (2009: 3) identified some of the links between mathematics and orientation and mobility; history and

social skills; mathematics/ science and independent living skills. Other specific examples of common concepts in the two curricula include, working in groups (social skills), learning about different jobs (career education), reading a map, and managing money (independent living skills). Teachers of learners with visual impairments and orientation and mobility specialists can pre-teach, co-teach, and re-teach ECC concepts that are partially covered by the general curriculum as one way to incorporate the ECC into a learners' education.

A study conducted by Lohmeier (2005: 128) showed that overall instruction in these areas is integrated into the regular curriculum and is taught during a normal school day. This was reported by 71.88% of the schools, while others indicated giving instruction before and after school. Although fewer schools do so, instruction is also provided outside of the school day in the areas of compensatory academic skills (18.75%), career education (18.75%), and visual efficiency (12.5%). These findings show that many ECC skills can be practised naturally throughout the day rather than sticking to the formal time table. For this practice to occur in a meaningful way, an assessment should identify that a learner has a need in an area of the ECC. The integrated approach to teaching ECC requires planning and collaboration of personnel as well as matching the subjects of the core curriculum to skills to be taught in ECC.

Lohmeier (2009: 3) states that aligning ECC to the general curriculum is a process and identified the stages as follows:

• The first step in this process involves determining what the learners with visual impairments need to learn from the general curriculum. This is done by professionals working with these learners, who include teachers and orientation and mobility specialists. These professionals need to set academic goals for their learners which will be addressed by themselves or the general education teacher.

• The second stage involves analysis of what the academic goals will achieve in the learner. An analysis of the goals is critical because goals will guide the teacher in the classroom on the important things to focus on when teaching.

• The third stage in the aligning process is one which requires the teacher of the learner to ascertain the skills the visually-impaired learner needs to have in order to achieve the set goals.

- Having identified the ECC skills needed, the teacher of the learner has to analyse these skill areas so that outcomes which are in line with the general curriculum are produced.
- In the final stage, the teacher of the visually-impaired constructs one integrated goal which is reasonable and also in line with the learners' ability.

According to Lohmeier (2009: 2), there are some gains to aligning ECC and general curriculum. Aligned ECC and general curriculum provides an avenue for meaningful achievement of individualised education programme goals. An alignment of the two curricula also helps in bridging concepts, thereby helping us appreciate that ECC is not an isolated matter but one that is part and parcel of the learners' school content.

3.2.4 Pre-college Programme

For visually-impaired learners transition from high school to college or university can bring about an array of experiences ranging from making new social networks to feelings of loss of support received at high school. A transition plan is an important area in the life of a visually-impaired person. Transition from high school to college for a visually-impaired learner requires preparation both academically and psychologically. Academic preparedness calls for acquisition or sharpening of skills such as assistive technology, self-determination, orderliness and social interaction. This is necessitated by the complexity of college work and the new environment which require the learner to use new strategies of dealing with academic, social and psychological demands. Kirchar and Simon (1984) cited in Trief and Feeney (2003: 137) in a study to analyze enrolments of learners with visual impairments found that many learners with viual impairments have challenges in college education and some drop out. The scenario may be due to high academic demands as learners lacked adequate skills. Researchers have therefore concluded that there was need to have a pre-college curriculum programme in place to help the learner become successful in college or university (Bina, 1997; Dote-Kwan & Senge, 2002) cited in Trief and Feeney (2003: 138). Some programmes proposed include ongoing instruction in ECC throughout the education of the learner while others talk about summer or after-school programmes before the learners enters college or university. Summer or after-school programmes can be a time to teach transition strategies

from high school to college, but also an opportunity for learners to sharpen skills in ECC which they already have. According to Trief and Feeney (2003: 139), some strategies suggested are communicating with college professors before enrolling, ordering materials early and working with the office in the college responsible for the welfare of learners with disabilities. Such preregistration preparations allow the institutions and the learners to streamline services for the individual learner as well as giving the learner a chance to sharpen their skills for the adjustment to be made in the institution.

3.2.5 Advocacy and Collaboration

Empowering visually-impaired persons is a shared responsibility that requires advocacy and collaboration. It is vital for raising their economic and social status because many groups in society have a stake and contribute to making empowerment succeed (Boame, 2009: 8). Friend and Cooks (2009: 9-11) outline the characteristics of collaboration as based on mutual goals and voluntary participation; depending on shared responsibility; partners sharing resources; and including shared accountability for learners.

In addition to assessment and instruction, one strategy that can help in delivery of ECC is the advocacy and collaboration whereby the teacher of the visually-impaired learners share information with different stakeholders. The teacher must be able to explain the importance of the skills and concepts of the ECC to administrators, parents, and other educators who may not understand the need for time and resources to be spent on the ECC (Lewis & McKenzie, 2009: 490). The role of administrators in the success of ECC instruction is critical. To be most effective, these teachers need to have administrative backing through resource allocation for the program as well as ensuring that teachers have normal workload. The entire educational team needs to reinforce the skills being taught, and the family needs to support the instruction that is provided. When the teachers of learners with visual impairments educate others about the importance of the ECC, professionals and families can work as a cohesive team providing adequate instruction and practice in the areas of the ECC. A collaborative approach is necessary for the implementation of ECC. With collaboration, teachers and other professionals have an opportunity to

align ECC into the general curriculum and also create an atmosphere where teaching ECC skills and achieving goals in the individualised education programme become feasible (Lohmeier, 2009: 2). Collaboration may help those involved to appreciate that ECC cannot be taught in isolation but must be a part of programme that visually-impaired learners receive. In a study by Hamilton-Jones and Vail (2014: 82), preliminary findings suggested that collaboration between teachers led to increased individualised instruction and increased academic support. This was viewed to have a positive impact on learner success in all areas. However, the study did not find a close measurable correlational evidence to back this finding. Further, participants in the study by Hamilton-Jones and Vail (2014: 80) felt that collaboration occurred when teachers shared resources and professional responsibility in order to teach all learners. The research further recommended that voluntary collaboration, particularly with co-teaching, was fundamental to the success of the programme.

3.2.6 Academic and Life Transition

Transition planning has been described as an outcome-oriented process which is designed to promote success in the post school environment. According to Alberta Education (2006: 6), comprehensive transition planning is not a once off activity, rather it is a student-centred, ongoing process which should identify, assess and document skills that learners require as they move to different learning environments. Just like learning teams, transition-planning teams comprise of parents, specialised teachers, orientation and mobility instructors, educators as well as representatives from other organisations involved with learners. The main role of the team is to develop a learner's portfolio which includes information pertinent to the skills necessary to succeed in new environments. The skills required should be clearly indicated as contained in ECC. These may include orientation and mobility, independent living skills and available scholarships (Department of Education, 2007: 4). According to Cameto, Levine and Wagner (2004: 4), transition-planning goals are identified early in the programme planning process and usually should end when a child reaches his/her teens. Older learners are usually not catered for by this programme and their parents are more likely to receive information from the schools about adult services.

According to Lohmeier (2005: 131), a successful transition into adulthood for the visually-impaired depends on, among others, academic skills and delivery of services through the ECC. Transition from school to college, for example, can be a time of uncertainties and challenges because learners have to shift from having many supports to being on their own. For visually-impaired learners, the requirements for adjustment are even greater (Trief & Feeney, 2003: 137). Besides adjusting psychologically, socially and academically to higher education, the visually-impaired must also master other skills essential for success in college.

Trief and Feeney (2003: 142) and McDonnall and Crudden (2009: 330) state that education programmes for the visually-impaired should emphasise both ECC and academics. The skills in the ECC need be taught throughout life, from primary year right into college education. The levels of teaching these skills would depend on whether the learner had previously acquired some competence and also met the demands at a particular stage of transition. If a learner acquired keyboard, orientation and mobility and braille skills at primary school, she/he may just need to perfect these at secondary level and increase speed as well accuracy in college or university.

A study by Wolffe and Kelly (2011: 346) established that there was a strong relationship between receipt of instruction in ECC-related content such as use of assistive technology, orientation and mobility, self-determination and employability and success in college, employment and engagement in social activities. This means that learners who have good skills easily adjust in their work and academic life. Research by Wolffe and Kelly (2011: 345) found that there was a significant relationship between being engaged in employment or post-secondary school training in specific job skills since high school and having received orientation and mobility services. This finding was notable because it expanded on the relationships established in the area of career education and employment or post-secondary outcomes and lent support to the hypothesis that instruction in both braille and orientation and mobility may well lead to positive outcomes for youths with visual impairments (Wolffe & Kelly, 2011: 347). Omvig (2005: 75) reiterated that every blind person needs competence in alternative techniques to address blindness in order to have a truly empowered, independent and sufficient life.

3.2.7 Enhancing Employability

DeMario (1990) cited in Ajuwon and Craig (2007: 12), stated that employers value employees who have good communication skills, get along well with co-workers, are dependable, complete tasks on time, have positive attitudes, use good orientation and mobility skills, and have broad independent living skills. Thus, the lack of these skills may adversely affect the employment of people with visual impairments and may be a major factor in their unemployment or underemployment.

In relation to employment, McDonnall (2011: 453) and Shaw, et al. (2007: 18) identified some variables that are important for employability of the visually-impaired people and these are; self-determination, early work experience, academic competence and social skills. Others are level of education, parental support, level of functional vision and use of assistive technology. These factors related to employment of the visually-impaired people are embedded in the ECC. Therefore, it can be suggested that good implementation of ECC could give learners with visual impairments an opportunity to learn skills necessary for academic, career and life adjustment. Wolffe and Kelly (2011: 345) found that there is a significant relationship between youths who were blind or with low vision having a paid job and having received career counselling. Youths who were blind or had low vision who had participated in volunteer or community service in the previous 12 months and had received career counselling services had been offered some employment. The results indicated that a stronger emphasis on career counselling and assistance with employment could very well prove beneficial to young people with visual impairments.

According to ILO (2011: 3), if opportunities for wage employment exist, people with disabilities, in particular the visually-impaired. should be assisted to find and retain those jobs. This may require networking with employers, trade unions and employment service providers. Furthermore, providing job-seeking skills and conducting specific job and work site analysis to match the disabled person to a job should be considered. Finally, providing supports and accommodations, identifying on-the-job coaches or mentors to provide support to disabled employees, and building awareness about the benefits of hiring disabled people become a necessity.

Another strategy to enhancing employability is to deal with negative attitudes of employers. Crudden, et al. (2005: 2) indicated that addressing negative attitudes by employers may be a challenge, but one way of dealing with this is through the business relations model or dual customer approach where vocational rehabilitation agencies interact with employers to provide information ranging from disability awareness to job placement.

3.2.8 Communication and Social Inclusion

Humans learn and make sense of their world through interactions. For children with vision impairment, interaction with others is crucial. This helps them to overcome some of the visual access limitations that they experience. Interaction also help them to make connections and develop their understanding of the world (Roe, 2008: 147). Social emotional development plays a crucial role in enhancing success in many contexts. Learners with visual impairments require both socio-emotional development and academic achievement in order to maximise their potential. According to the findings by Roe (2008: 147), improved social emotional competences have been linked to positive impact on interpersonal skills and the quality of interactions and academic achievement.

According to Gold, Shaw and Wolffe (2010: 439), some of the challenges learners with special needs encounter, such as bullying, are a result of limited social skills. Some factors that are often linked to children being bullied are: being alone at playtime, having less than two good friends and having extra help in school. This finding suggests that learners with visual impairments may be encountering challenges either in initiating or maintaining intimate relationships. Researchers such as Wagner (2004: 1) have shown that educators in the field have acknowledged that learners with visual impairments both in special schools and inclusive settings lack social competence. Skill in social competence is a key component of a positive self-concept, higher self-esteem, more assertive behaviour, and the ability to accept one's disability as a part of oneself. Teaching social competence in an expanded approach is necessary to enable visually-impaired learners to be autonomous in communities designed for the sighted (Wagner, 2004: 4). Sacks, Kekelis and Gaylord-Ross (1997: 1) suggested that there is a need to be more serious in

teaching social skills to learners with visual impairments. Teacher training programmes and the adapted curriculum should be clear about teaching social skills.

Researchers like DeMario, Rex and Morreau (1990) and Wolffe and Sacks (1997) cited in Ajuwon and Craig (2007: 12) recognise that teachers of learners with visual impairments, working with parents and other professionals on the educational team, are responsible for teaching daily living tasks (Lewis & Iselin, 2002: 334). Anecdotal evidence indicates that children who are blind or visually-impaired and do not develop appropriate socialisation, daily living, and independence skills have great difficulty forming social relationships in adulthood, which causes them to have fewer or no friends more often than is the case with sighted children.

It is critical that learners with visual impairments learn good social and personal skills if they are to obtain and retain jobs. Possessing these independent living and social skills directly affects the employability of people who are blind or visually-impaired and their ability to integrate into the community. Cavenaugh and Giesen (2012: 409) have also established through research that acquisition of social skills by learners with visual impairments improved acceptance by sighted peers. Equally visually-impaired learners who received counselling and took part in group activities with sighted peers had greater gains in self-concept, more favourable attitudes towards their disability and a more internal locus of control than their peers who did not receive training.

3.2.9 Access to Assistive Technology

A study done by Kelly and Smith (2008: 528) established that visually-impaired adolescents were not as active in advanced social interaction through technology like internet, telephone and computer chat as adolescents with other disabilities, particularly the hearing impaired. A reason to explain this finding is that most visually-impaired youth do not have social and technological skills. Therefore, teachers of visually-impaired learners are challenged to teach social and technological skills to the visually-impaired. These two areas can be intertwined in ECC so that visually-impaired learners can use both traditional and advanced social

skills. Social skills both face to face and digital forms are necessary for social and academic success.

Kelly and Wolffe (2012: 604) found that the use of internet and other assistive technology enhanced the communication skills of the visually-impaired persons as well as social interaction. This study established that internet use and post-secondary engagements such as college training, employment and community service were related. An increase in assistive technology and internet use enables visually-impaired persons get involved in these activities. There is a close link between internet use and competence in assistive technology. Learners with visual impairments need, in most instances, to use assistive devices such as screen readers and magnifiers to read materials accessed through internet. It can be deduced that teaching learners to use internet to conduct research, send emails and be involved in social networking should be part of ECC.

Kelly and Smith (2008: 538) have equally emphasised the point that academic, social and professional success of visually-impaired persons depends on the training in the use of assistive technology to access social forums. Assistive technology therefore, expands social horizons thereby reducing isolation of the visually-impaired.

3.2.10 Economic Empowerment

According to Boame (2009: 2), educational empowerment is a continuous process, which offers an individual the chance to be responsible for him or herself independently. Empowerment refers to "giving people (including those with disabilities) a variety of opportunities to discover their potential, understand their environment, discover their rights and take total control of their destiny". This requires access to knowledge and skills needed to develop their capacity in order to determine their future.

Persons with visual impairments can contribute to the development of society. One way to enable the visually-impaired to make this contribution is to ensure high quality education with knowledge and skills in ECC (McDonough, et al., 2006: 597). A person who is visually-impaired who has a command of ECC and academic subjects

is fully equipped to be competitive in the workforce, and contributes to the economy rather than being dependent on the government for handouts. It has been common to see visually-impaired persons beg on the streets. It may be argued that a blend of ECC and core curriculum would help alleviate some economic and social challenges that visually-impaired persons face. According to Malakpa (2007: 1), employment possibilities are stressed for the blind from an early age because, for persons with, and those without disabilities, the acquisition and retention of gainful employment has multiple benefits. *Inter alia*, it leads to economic freedom which, in turn, heightens one's standard of living, increases one's socio-economic contribution and enhances a person's sense of self-worth.

Boame (2009: 5-6) identified other benefits derived from empowerment as follows:

● Reduction in unemployment

If quality education were provided in academic and vocational skills, visually-impaired people would be more likely to become gainfully employed in the formal sector like teaching and clerical services as well as in the informal sector like small-scale businesses. If visually-impaired persons were gainfully employed, this would curb the incidence of begging. Furthermore, the Ministry of Community Development, Mother and Child Health (2015: 7) emphasises that linking economic empowerment of persons with visual impairments will help uplift social acceptance and reduce the shame and fear in those with visual impairments.

● Reduction in dependency

Providing visually-impaired learners with needed materials like white canes, optical devices, braille materials, and large print books will enhance their independence in many areas of life.

● Raising Community Recognition for visually-impaired persons

Raising community recognition of visually-impaired person gives a clear message that disability is not inability. Making successful visually-impaired persons visible to the community is one way of sensitising as well as advocating for inclusion of visually-impaired people.

Access to knowledge and skills can only be obtained through quality education that is provided by the government and other stakeholders like churches and Non-Governmental Organisations to visually-impaired persons.

3.3 CHAPTER SUMMARY

The ECC for the visually-impaired learners is important for both academic and different transition points such as college or university, work or employment and community living. Infusing a practical approach in the education of the learners with visual impairments would provide them with opportunities to receive skills necessary for life. The strategies suggested to improve implementation of ECC, if embraced, can help improve the image of ECC in Zambia and also ensure that learners benefit from the education offered to all. The next chapter presents the research design adopted in this study.

CHAPTER 4
RESEARCH METHODOLOGY AND DESIGN

4.1 INTRODUCTION

The focus of this chapter is the research approach, the design of the research and the details of the methods used to collect data. Further, the chapter discusses the measures that were used to ensure credibility and trustworthiness. Ethical issues in relation to this research are also presented.

4.2 RESEARCH APPROACH AND DESIGN

The basic purpose of the research was to get an in-depth understanding of the teaching of the ECC for learners with visual impairments. A research design can be understood by different scholars to mean different things. According to Creswell, Hanson, Plano Clark and Morales (2007: 237), a design may refer to approaches to research that embrace formulating research questions and procedures for collecting, analysing and reporting findings. Yin (2011: 75) states that, a research design concerns logical plans and not logistical plans. It focuses on issues of data collection, methods and sampling techniques.

In order to achieve an in-depth understanding of the ECC for learners with visual impairments, a qualitative approach was deemed to be most appropriate. Kothari (2004: 3) and Nolen and Talbert (2011: 235) have stated that a qualitative approach is one that investigates the quality or kind of phenomenon. That is, it aims at discovering the underlying motives, small-scale narratives and desires of people using in-depth interviews to achieve this. It is concerned with subjective and emotional assessment of attitudes, opinions and behaviours. Creswell (2007: 39) agrees that, in the entire process of research, the researcher focuses on understanding the participants' interpretation of the issue at hand.

Further, Denzin and Lincoln (2008: 7) stated that one fact about all qualitative design approaches is that they are descriptive in nature and the protocols for data collection, data analysis and data representations lead to narrative data that are thick

and descriptive in scope. The explanation for this is that the data collected takes the form of words or pictures rather than numbers.

According to Creswell (2007: 236), qualitative studies can be placed in philosophical perspectives based on the nature of reality (ontology) from the side of the researcher and respondents. In qualitative research, the intention is to report the different realities from the perspectives of the researcher and participants to the reader of the research. The intimate relationship between the researcher and what is studied and the situational constraints that shape the inquiry are equally emphasised in qualitative research (Denzin & Lincoln, 2008: 8). In other words, there is no single reality but it is made up of multiple realities as constructed by individuals or group perspectives. This reality is also unique to individual or group situations. Another philosophical point is the relationship between the researcher (who is the knower) and what is known (researched) called epistemology (Creswell, 2007: 18). It is assumed that when the researcher spends much time in the field, they get "to know".

A qualitative approach was found to be suitable for this particular study. Looking at the nature of the procedures involved, the study relied heavily on qualitative techniques and the researcher was actively involved in the construction of the realities on the ECC by capturing the perspectives, experiences and opinions of participants through detailed interviews, focus group discussions, questionnaires and document analysis.

A qualitative case study design was selected for this study. Creswell (2007: 77), Creswell, et al. (2007: 245) and Yin (2003: 13) describe the qualitative case study (QCS) approach as an exploration of a "bounded system" or case over time through detailed, in-depth data collection involving multiple sources of information (e.g. observations, interviews, audio-visual material and documents and reports), each with its own sampling, data collection and analysis strategies.

In QCS, the goal of collecting data through a variety of means serves two purposes: firstly to enhance the theory generating capabilities of the case and secondly to provide additional validity to assertions made by either the researcher or the participants in the case itself (Stake, 2005: 444). According to Ghosh (2008: 225), through case study, one can know precisely the factors and causes of a particular phenomenon thereby covering contextual conditions.

There are different types of qualitative case studies. One way of distinguishing is by the size of the bounded case, such as whether it is one individual, several individuals, a group, an entire programme, or an activity. According to Stake (1995: 49) qualitative case studies may also be distinguished by the intent of the case analysis. Three variations exist in terms of intent such as the single instrumental case study, the collective or multiple-case study and the intrinsic case study. In a single instrumental case study, Stake (1995: 52) states that the researcher focuses on an issue or concern and then selects one bounded case to illustrate it. In a collective or multiple-case study, the researcher again selects one issue or concern but also selects multiple case studies to illustrate the issue. The researcher might select several programmes from several research sites or multiple programmes within a single site. Often, the inquirer purposefully selects multiple cases to show different perspectives on the issue.

This study engaged a multiple case study design where three schools, two institutions of higher learning and curriculum development centre were selected to provide an in-depth look at what constitutes an ECC, the way it is taught and also how it relates to the academic and community life of visually-impaired learners. The study explored facts and opinions of people involved in the implementation of the ECC.

This study was identified as a qualitative case study that is descriptive in nature. Therefore, the next step is to select specific techniques and procedures used in data collection and analysis. The choice of procedures and techniques in research is guided by whether the research approach is qualitative or quantitative. Quantitative research focuses on collecting numerical data about a situation. On the other hand, qualitative research endeavours to bring out in-depth information on perceptions, attitudes and experiences of participants (Hemming, 2008: 140). Qualitative researchers use techniques such as interviews, focus group discussions and the data collected is dense and reflects the reasoning and feeling of the participants about the subject (Yin, 2011: 8). This study used interviews, questionnaires, focus groups and document analysis techniques.

4.2.1 Research Sites

The research sites identified consist of one university, a teacher training college for special education, a curriculum development centre and three special schools. The three institutions were based in Lusaka where the researcher resides. One special school is located 700 kilometres in the western part of Zambia. The second school is 1 000 kilometres away and the third one is 1 200 kilometres away from the researcher's location.

The research sites were chosen on purpose. The university and the college were the only public teacher training institutions offering training of teachers in ECC. Therefore, their selection was purposefully done. Three schools were chosen by virtue of being exclusively public residential schools for learners with visual impairments. The other two residential schools in the country have integrated style where learners without disabilities or with other disabilities such hearing impairments were incorporated from grade one. The schools were selected because they were specialised residential schools for learners with visual impairments. The university and college are training places for the teachers of learners with visual impairments. The curriculum development centre develops the curriculum for the teachers to use as a guide in teaching the visually-impaired learners.

4.2.2 Selection of Research Participants

The target population for the study included learners with visual impairments and teachers from three special schools for learners with visual impairments, students with visual impairments at one university, trainers for teachers of learners with visual impairments and curriculum specialists in visual impairments. The number of participants in a study is determined by its design and purpose. Sandelowski (1995) cited in Onwuegbuzie and Collins (2007: 289) states that, as far as possible, qualitative research is not only to study a few sites or individuals but also to collect extensive details about each site or individual being studied. The intent in qualitative research is not to generalise the information but to explain specific issues in a phenomenon. Besides, Stake (2010: 57) indicates that data collection techniques are

laborious and time-consuming and it is therefore advisable that the number of participants in qualitative studies should be small.

Initially, the researcher planned to have 30 learners with visual impairments, 10 university students with visual impairments, 15 teachers of learners with visual impairments, four teacher trainers and two curriculum specialists. However, during the process of collecting data, the number of teacher trainers reduced to three, the learners were 28 while the numbers of teachers of learners with visual impairments were 22. The changes were due to variations in numbers of participants on the sites. For example, only three teacher trainers were available in the institutions.

The change in the initial plan was not a strange phenomenon. Creswell (2007: 39) states that the research process in a qualitative approach is emergent, meaning that the initial plan is not final. It may change depending on the experiences of the researcher as they enter the field to begin data collection. The change in research plan however should not dilute the quality of the research but help the researcher collect the most valuable and credible data.

4.2.3 Sampling Procedure

In terms of sampling procedure, the participants were selected purposively. Ghosh (2008: 234) states that purposive sampling is the selection of a sample based on the judgment of the researcher. The concept of purposive sampling as used in qualitative research means that the inquirer selects individuals and sites for study because they can inform the understanding of the research problem and central phenomenon in the study (Creswell 2007: 125). Although sampling can change during a study and researchers need to be flexible, there is a need to identify a strategy beforehand. The sample had 65 participants comprising of 28 learners with visual impairments from Grade 5 to 12, 22 teachers from 3 selected special schools; 10 university students with visual impairments, 2 curriculum specialists and, 1 university and 2 college lecturers.

4.3 PROCEDURE AND METHODS OF DATA COLLECTION

Collection of data in a qualitative case study is quite extensive, drawing on multiple sources of information. Some types of information are documents, archival records, interviews, direct observations, participant observations and physical artifacts (Creswell, 2007: 75). The data collection process begun with obtaining permission form the ministry of education. Thereafter the researcher entered the research sites. Interviews were conducted with curriculum specialists, university students with visual impairments and teacher trainers. As for learners with visual impairments, focused group discussions were conducted in the school. Teachers were given questionnaires which they had to fill in.

The primary data gathering instruments for this study were interviews, focus group discussions and questionnaires. To supplement these techniques, documents were read to get an insight into the policy framework governing the education of learners with visual impairments, particularly in ECC. The techniques used in this study are discussed below.

4.3.1 Interviews

Cannell and Kahn (1968) cited in Cohen, Manion and Morrison (2007: 351) define research interviews as "a two-person conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information based on the objectives of a particular study". Further, Punch (1998: 175), states that an interview is an approach of asking questions and receiving answers. An interview offers an opportunity for detailed investigation of each person's personal perspective. When used in qualitative approach, it is a powerful way of understanding other people's perceptions, meanings, definitions and construction of reality which gives a rich context of meaning. There are various forms of interview protocols that can be developed to obtain thick, rich data. The types could be an informal conversational interview, which is said to be spontaneous in nature in that the questions are generated during an interaction with the participant. The researcher does not have specific questions to ask. It is rather the interaction and experiences of the

participant at a particular moment of the research process which determine the interview (Turner, 2010: 7-8).

An interview can be in the form called general interview guide approach. The general interview guide approach is also called a semi-structured interview characterised by a predetermined set of questions or issues for all interviewees. It is a "conversation with a purpose" (Mason, 2002, cited in Hemming, 2008: 153; Willig, 2008: 23). In this interview design, the set questions are used to ensure that the relevant issues on the topic are covered. The interviewer is at liberty to ask questions outside the set ones especially in order to get clarification and explanations on the raised issues (Punch, 1998: 175). Another design of an interview is standardised, open-ended interview. The standardised, open-ended interview format which scholars such as Yin (2011: 133) call the structured interview, requires that researchers should start the interview with a set of carefully-worded and arranged questions to ask participants in the same sequence. This format is not flexible enough to allow for much probing.

This study used a semi-structured interview guides to collect data from ten students with visual impairments, three teacher trainers and two curriculum specialists (Appendices A2, A3 and A4). The researcher opened communication lines with the participants to plan on when and where the interviews were to be conducted. Interviews were found suitable because they gave participants an opportunity to give detailed accounts of what they knew about ECC. This technique also enabled the researcher to probe or seek further clarification on issues outside the set questions thereby gathering rich and thick data. With a semi-structured interview guide, the researcher was able to capture non-verbal responses as well. Interviews also provided the researcher with an opportunity to appreciate how embedded ECC was in the overall context of persons with visual impairments.

4.3.2 Focus Group Discussion

A focus group discussion is a carefully-planned discussion in a group designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment. In a focus group discussion (FGD), participants hear from each other. As the discussion progresses, participants have an opportunity to refine and sharpen

what they have to say and move to a deeper and more desired level of interaction (Ritchie & Lewis, 2003: 171). The interaction of participants is useful in the generation of solutions or strategies to an issue because there is team work with less influence from the researcher. The FGD has been found to be good at providing a social context within which the phenomenon is taking place (Cohen, et al., 2007: 376). By responding to each other, participants reveal more of their own thoughts and experiences on the subject of study. In other words, FGDs shape people's views or reflections on social constructions as well as individual self-identity shared meanings (Ritchie & Lewis, 2003: 171).

Furthermore, Ritchie and Lewis (2003: 172) identified some forms that FGDs may take. They talk about the typical FGD which involves between six to eight participants who meet only once for a period of one or two hours. The second FGD form is where the constituted group reconvenes within one or two weeks after the first meeting mainly to report their experiences after an intervention or carrying out an assignment. An FGD may take the form of a workshop where a larger group meets for a longer session with a structured programme of activities. Small groups can be created with specific tasks assigned and later report to the larger group. Finally, FGDs may be presented as a consultative process. Morgan(1988) in Cohen et.al (2007:376) state that consultative panels can be conducted by drawing people together in a series of sessions to deliberate and this contributes to decision making.

The form or type of FGD used depends on the nature of the study and the data the researcher would like to be generated. This study used the typical type of FGD where participants met once for about one hour. This type was found to be more viable because there was no justification to have follow-up discussions because there were no interventions put in place to warrant follow-ups. FGDs were relevant because they enabled the learners to listen to one another. They were able to agree and disagree on issues, thereby giving the study the complex and more accurate scenario on the ground. The technique was used to collect information from 28 in three focus group discussions in the special schools. The focus group discussion guide is found in Appendix A1.

4.3.3 Questionnaire

There are several types of questionnaires from which a researcher can select. One principle with regard to questionnaire choice is that a large study sample attracts a closed, numerical and highly structured questionnaire while a small sample size may use an open and less structured type with a lot of opportunity for explanations (Cohen, et al., 2007: 320-321). A structured questionnaire contains a variety or ranges of possible answers which are processed in a rapid manner statistically. In a structured questionnaire, the nature of the data and its categories are known beforehand. Such an approach is quantitative in nature.

On the other hand, Cohen, et al. (2007: 321) state that a semi-structured questionnaire has a series of questions, statements or items presented which the respondents are asked to answer, respond to or comment on. In this type of questionnaire, the structure, sequence and focus is available but the format is open-ended enabling respondents to reply in their own words. Bailey (1994: 120) equally asserts that open-ended questions are useful if the possible answers are unknown or the questionnaire is exploratory or if there are many possible categories of responses. Semi-structured questionnaires with open-ended questions are advantageous because they enable respondents to write accounts and give explanations in their own words as much as they would like to and, yield in-depth responses when investigating complex issues to which simple answers cannot be provided.

The questionnaire used in this study was semi-structured with open ended questions (Appendix A5). The questionnaire was used to collect information from twenty-one teachers of learners with visual impairments in special schools. This was good for the study because it gave the respondents a chance to write detailed accounts of the complex issues in ECC. The teachers were able to express themselves and provide as much information as they could.

4.4 METHODS OF DATA ANALYSIS

Data analysis is a systematic search for meaning in data which can be communicated to others. Hatch (2002: 148) states that analysis means organising

and interrogating data in a way that enables the researcher to see patterns, identify themes, discover relationships and make interpretations or generate theories. The researcher has to be actively engaged intellectually to go through the data to realise these detailed elements of the process. Data analysis in qualitative research is not a one-off exercise but it is custom-built and iterative process. It involves collection of data, data analysis and report writing. All these are interrelated and often occur simultaneously. In other words, data analysis has three general but distinct stages of preparing and organising data, reducing the data into themes through coding and condensing codes and finally representing the data as figures, tables or discussion (Creswell, 2007: 147-150). It should be noted that data processing begins during fieldwork or data collection.

According to Kerlinger (1970) in Cohen et.al (2007: 360) coding is the translation of question responses and respondent information to specific categories for the purpose of analysis. Saldana (2009: 4) describes coding as a transitional process between data collection and analysis. Identifying codes is cyclic in nature and calls for refining of the initial nodes.

The three stages in coding namely open coding, axial coding and selective coding as identified by Strauss and Corbin (1998) in Creswell (2007: 160) were followed. In the first stage the researcher examines field notes, transcripts and documents. The transcription of interviews and focus group discussions started as soon as they were conducted. Transcription took quite some time especially in the beginning as the researcher was getting acquainted with the task. The scripts were sent to the participants for verification especially to check the correctness of the transcribed information. Some participants gave a bit more information after going through the scripts.

The transcripts were entered into qualitative data analysis software NVivo 10. There were a total of 16 documents or scripts, 13 individual interviews, three focus group discussions and one excel sheet of the teacher's questionnaire. The second stage was to identify nodes or themes to be used in coding the data. Identification of emerging themes or categories preceded coding of information in the software.

In the second stage of coding called axial coding, the researcher reviews the database to provide insight to categories (Creswell 2007: 161). Having identified the

codes or nodes and grouped them in line with the research objectives, the researcher had to begin coding in NVivo. The coding process involved going through each script and code information on the identified nodes or themes. Sub-categories or themes also emerged. These were coded under the main themes. The quotations that made up the nodes were analyzed to arrive at significant findings. In the last stage of coding known as the main focus is to organize information into figure or coding paradigm where interrelated information is put together to generate propositions. In this stage the researcher was able to interrelate data from different respondents on specific themes. This holistic analysis of data was done in order to understand the issues in the study. It also helped to identify emerging concepts and connect different phenomena to come up with propositions. Besides, thematic analysis aided understanding of the complexity and relatedness of the issues in the implementation of the ECC.

The data gathered from documents was analysed using four stages in documentary analysis as identified by Punch (1998: 230). These are the purpose of production, social organisation of the document, direct analysis of text for meaning and application of different perspectives. The documents which were analysed were: The Zambia Education Curriculum Framework (ZECF) 2013; Educating Our Future policy document, 1996; and the United Nations CRPD, 2006. In terms of the purpose, documents were read to examine and to know out why they were produced. The main purpose for production of the documents was to guide the various stakeholders (teachers, teacher trainers and curriculum specialist) on their various roles and give specific information about educating learners with visual impairments. The contents of the documents were also analysed to establish the implications of implementation and to also identify the gaps in relation to practice in schools, curriculum development and teacher training for ECC.

4.5 MEASURES TO ENSURE TRUSTWORTHINESS

Accounting for reliability and validity of a study is important in every study. In qualitative and quantitative research issues of reliability and validity differ. In qualitative research, reliability is an examination of the stability or consistency of methods and responses over time. On the other hand, validity is based on the

determination of the extent to which the findings are accurate and portray the reality under investigation from the standpoint of the researcher, participant or the reader (Cohen, et al., 2007: 149; Creswell, 2009: 109-191). In qualitative research, validity and reliability are broadly referred to as trustworthiness. To establish trustworthiness of a study, Lincoln and Guba (1985) cited in Cohen, et al. (2007: 136) propose unique terms such as credibility, transferability, dependability and confirmability as equivalents to internal validity, external validity, reliability and objectivity respectively.

4.5.1 Credibility

Creswell (2007: 207) defines credibility as the truth value. It is a test to whether the study is authentic. Credibility of a study can be assessed by evaluating the data collected, the analysis and the conclusions that are made.

One strategy of checking for credibility is what is referred to as triangulation or crystallisation. Triangulation is a technique that emerged as a response to criticism of qualitative approaches from positivist researchers, particularly the charge that such approaches lack appropriate validity (Cohen, et al., 2007: 141). The concept draws on the metaphor from surveying and navigating, where a single unknown location is found at the point where the trajectories from three known locations meet. Hemming (2008: 154) and Creswell (2007: 208) explain that under crystallisation, methods of data collection are mixed. Using multiple sources of data and the number of participants could improve the credibility of research findings by directing a range of different methods at the same problem and checking whether or not they all returned similar results (Boblin, Ireland, Kirkpatrick & Robertson, 2013: 4 & Hemming, 2008: 156). Triangulation can assist the researcher in identifying both convergence and divergence in the emerging data. This study used a number of methods to collect data. These included interviews, focus group discussions, document analysis and open-ended questionnaires. These different methods provided strength to the study.

Member checking was another strategy which helped to make the study credible. According to Boblin, et al., (2013: 4) and Punch (1998: 260), member checking involves taking data and interpretations back to the participants so that they can

confirm the credibility of the information in the transcript. The scripts were sent to some participants to confirm information. Some of them made adjustments to the scripts. The researched data was equally recorded on a digital recorder and the field notes complemented the capture of non-verbal data from the participants. The recordings were listened to repeatedly to ensure that the transcripts were correct.

Another strategy used to ensure credibility is the prolonged engagement and persistent observation of participants in the field (Creswell, 2007: 207). This helps to create trust between the researcher and the participants and helps the researcher to get greater understanding of the context and allow for checking for misinformation. The more time the researcher spends, the more experience he or she gains and the more chances there are of collecting accurate and valid data. In this study, the researcher remained in the field conducting interviews particularly at the university and the teacher training college.

4.5.2 Transferability

In a qualitative study, external validity is concerned with the degree to which the results can be generalised to other settings with similar population. Qualitative researchers are reluctant to generalise findings because the context of cases differs in which qualitative studies are conducted and unique thereby making generalisation a challenge (Yin, 2002: 36-37). However, to overcome this challenge, the inquirer needs to select representative cases to include in the qualitative study. Further, Yin (2003) cited in Creswell, et al. (2007: 245) states that a multiple-case design uses the logic of replication where the procedures are replicated for each case. Case studies are best generalised to a theory where the results of the findings are analysed in terms of a broader theory to see how well they fit.

Transferability can also be achieved if the researcher provides thick, detailed descriptions about the research processes, the relationship between researcher and participants. This way, readers can decide whether the findings can be generalised in other contexts (Morrow, 2005: 252). This study endeavoured to meet this criterion of transferability by including three schools for learners with visual impairments and also by checking the findings with the university students who have been learners in

these schools before. Further, the teacher trainers and curriculum development specialists as participants strengthened the findings for possible generalisation to other contexts with detailed descriptions of the processes involved in the research and enhanced transferability of the findings.

4.5.3 Dependability

The term dependability is used in qualitative research to refer to reliability. In qualitative inquiry researchers must endeavour to enable future researchers repeat their study (Shenton, 2004: 63). Dependability is an instrument of maintaining quality achieved through detailed reporting at all the stages in the entire process of research from data collection through analysis to interpretation (Yin, 2009: 45). Dependability and confirmability can be established through an auditing of the research process (Creswell, 2007: 204). Thus, in this study the researcher gave the research report to a senior researcher in qualitative research to give comments about the major processes in a qualitative inquiry which the study followed and documented. This audit was used to supplement the feedback and comments from the researchers' promoter.

4.5.6 Confirmability

Morrow (2005: 252) elaborated that confirmability is based on the perspective that integrity of a study is dependent on how the researcher puts together the data from the analysis process and the results of the study to make it easy for the reader to confirm that the findings are adequate. One way of ensuring confirmability is through a process known as audit trail. In this study, the researcher's processes were availed to the other researchers for purposes of examination and confirmation. Shenton (2004: 71) affirms that we can ensure confirmability through triangulation of data sources. This study collected data from different sources. These included the teacher trainers, curriculum specialists and teachers, students in the university and learners in the schools. In addition, multiple data collection methods were engaged such as interviews, focus group discussion, open ended questionnaires and

document analysis. The researcher also enhanced confirmability through member checking.

4.6 ETHICAL CONSIDERATIONS

Ethical issues arise in both qualitative and quantitative approaches. Research scholars like Hatch (2002: 66) and Creswell (2007: 170) have advised that researchers must take measures to protect participants in research from any kind of harm or loss of dignity. In this study the first step was to obtain ethical clearance from the University of South Africa. Permission was further obtained from the Ministry of Education in Zambia to conduct research in government institutions. This study adhered to the following ethical issues.

The researcher explained to the participants the procedures and objectives of the research and obtained permission from them to have interviews audio recorded. The participants were informed of confidentiality and assured them that the information they would give was going to be used for academic purposes only. The real names of the participants were not to be used in the final report or any scripts which were generated from the data; instead, identification codes would be used so that the information given would not be directly linked to them.

Participants in the study were engaged on voluntary basis. None were forced or coerced into taking part in the study and they were informed that they were free to withdraw from participating without justification. The researcher obtained written consent from participants to participate in the study. For the participants below the age of eighteen, parental consent was obtained. In as much as qualitative research intrudes in the lives of the participants, the researcher respected the privacy of the participants by conducting interviews in neutral places and endeavoured to ask questions that did not bring emotional or psychological harm to the participants.

4.7 CHAPTER SUMMARY

This chapter presented the methodologies of the study. The selection of qualitative approach and case study design was accounted for. The chapter also gave details of

the participants in the study and the specific research sites. The primary research participants are learners with visual impairments in the special schools and universities and their teachers. in addition to these students with visual impairments, teacher trainers for teachers of learners with visual impairments and curriculum development specialists were sources of data. The methods of data collection have also been described in detail. The methods were interviews, questionnaires, focus group discussions and documents. In this chapter, issues of validity and reliability have been conceptualised as they relate to qualitative research. The equivalent terms credibility, transferability, dependability and confirmability as used in qualitative research have been given and how these relate in order to enhance trustworthiness of the study.

Finally, a detailed account of how this research upheld ethical issues in research was presented. The ethical procedures adhered to related to UNISA research ethics policy. The researcher has given an account of how matters dealing with confidentiality, informed consent and anonymity were applied to ensure that the dignity of the participants was upheld.

CHAPTER 5

PRESENTATION AND DISCUSSION OF FINDINGS

5.1 INTRODUCTION

This chapter presents the main findings from the study. The first part gives biographical information of participants. The section on findings follows and is presented according to themes which emerged from data gathered from all respondents. The findings are supported by many verbatim quotations from respondents. Each presentation is followed by a discussion of the findings. The theoretical framework and the researcher reflections will shed light to the discussion.

5.2 BIOGRAPHICAL PROFILES OF PARTICIPANTS

The study had two curriculum specialists, 22 teachers, 3 teacher trainers, 28 learners from special schools and 10 students with visual impairment from the university. The profiles of these participants are presented below.

The number of curriculum specialists who took part in the study were two. Their profiles are presented below.

Table 5.1: Profile of curriculum specialists

Code	Gender	Work Experience
CDC01	Male	12 years
CDC02	Male	10 years

A total number of 22 teachers participated in the study. There were 13 male and 9 female participants.

Table 5.2: Profile of Teachers

Qualification	Gender	
	Male	Female
Certificate	2	2
Diploma	8	5
Degree	3	2
Masters	0	0
Total	**13**	**9**

The study had three focus group discussions, one from each special school giving a total of 28 learners. In Table 5.3 below the characteristics of learners are presented according focus group codes.

Table 5.3: Focus group discussants

Discussant	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
FGD01										
Gender	F	M	F	M	M	F	F	M		
Grade	12	5	7	8	9	10	11	12		
FGD02										
Gender	F	M	M	F	F	M	M	M	M	F
Grade	11	10	8	9	5	7	8	11	12	10
FGD03										
Gender	F	F	M	M	M	M	F	M	F	M
Grade	11	11	10	12	7	5	7	8	10	9

Students with visual impairments at the university who participated in the study were 10. Their profiles are presented in Table 5.4 below.

Table 5.4: Profile of university students

Code	Gender	Programme	Year of study
IP1	M	Special education	1
IP2	F	Special education	3
1P3	F	Special education	3
IP4	M	Special education	3
IP5	M	Special education	3
IP6	F	Special education	3
IP7	M	Special education	2
IP8	M	Special education	2
IP9	M	Special education	1
IP10	M	Special education	1

A total number of 3 teacher trainers participated in the study. Table 5.5 below presents their profiles.

Table 5.5: Profile of teacher trainer

Code	Gender	Work Experience
TT1	Male	5 years
TT2	Male	5 years
TT3	Female	4 years

5.3 FINDINGS AND DISCUSSION

The findings are presented and discussed in this section. The main themes under which the presentation is done are: aspects that constitute ECC for learners with visual impairments, challenges in the delivery of ECC, the relationship among ECC, academic and life achievement and finally the strategies to improve delivery of ECC.

5.3.1 Expanded Core Curriculum for the Visually-Impaired Learners

The study established a number of components that characterise the delivery of ECC. Among the aspects are policy guidelines in special education provision, facets of teacher training, curriculum accessibility, the personnel teaching ECC skills and the methods of teaching. These aspects are discussed in the following section.

5.3.1.1 Nature of ECC

Curriculum specialists gave an understanding of ECC. The response below indicates that ECC was given by schools up and above the core curriculum to help the learners with visual impairments to enable them access the general curriculum. The curriculum specialists said that ECC was also referred to as specialised activities or plus curriculum. The following submission was made by CDC01.

> *With regard to the visually-impaired ECC we may be referring to other activities that the school or teachers must do to help the visually-impaired access the general curriculum. They need to learn the same math, social*

studies or geography except that they may use different methods to learn the same geography. They may need to learn to use Tayler frames, abacas. So the mathematics will be the same core except they will need additional skills on how to add subtract using abacas. That's a different skill they need to know how to use talking calculators, laptops with projected voices or speech they need to learn how to use keyboards without mouse. So those can be termed as additional skills that they need, also called plus curriculum or specialised activities.

The curriculum specialist brought out a number of tools or equipment that are supposed to be used in schools. However, there was no indication that these were available for use in schools.

The understanding of ECC skills by learners in special schools was given by mentioning the additional skills which they were learning besides subjects in the core curriculum. The learners gave responses which comprised a mention of some skill areas but not all nine skill areas as contained in the ECC. This way the study established that participants were appreciative of ECC and the skills were mentioned as per individual experience. The fact that skills were mentioned in parts gives the idea that skills were learnt though not in a complete manner.

The area of independent living also known as "activities for daily living" (ADL) was brought out as one area most learners were taught skills in. The most widely taught skills were laundry, cookery, cleaning and personal hygiene. Sapp and Hatlen (2010: 340) indicate that these skills must be taught to learners with visual impairments in a direct manner. This study also established that some independent living and life management skills were embedded in the subject called Home Economics while others were taught as a routine of self-care in the boarding school environment. FGD02 (R1) and FGD03 learners indicated that home economics as a core subject contained skills that were taught in independent living and life management, such as personal hygiene. Social skills were also reported to be embedded in home economics. The following were the viewpoints:

We have learnt cooking in home economics, there is tailoring, cooking and also table manners are there.

In FGD02 (R9) stated the following about how he learnt these skills:

For us who use the resource room we clean it, mop and rake outside, including washing our clothes. In religious education, there is a saying 'cleanliness is next to Godliness" that is what we try here.

Compensatory or functional academic skills are needed to access the core curriculum. This study found that learners were taught different skills such as the use of braille and ink print. Some learners were using more than one mode of communication. For example, in FGD1 and FGD2 (R2 and R4 respectively) these learners were trained in both braille and large print. This finding is similar to the one by Goudiras, et al. (2009: 115) where it was found that some learners with visual impairments were using more than one medium to read. The choice whether to use braille or ink print was not solely influenced by visual abilities of the learners but other factors such as academic demands and, in the case of learners in FGD3, the pressure for examination assessment. Learners did not mention having been taught self-determination skills. In the case of visual efficiency skills, few learners indicated that they learnt to use sight to learn. For example, in FGD1 and FGD3 learners did not describe elements of visual efficiency training as proposed in the model by Li (2003: 3). Visual efficiency skills help learners get the most from their remaining vision. This finding agrees with that of Lohmeier, et al. (2009b: 108) who found self-determination to be among the least taught skills in ECC, others being visual efficiency and recreation and leisure.

In terms of career and life management skills these were found to be taught to some of the learners. They felt that these skills helped them to produce items for sale and probably earn an income. In FGD01, R1 stated that learners were being guided on the type of jobs they could do. The serious challenge for these learners was the limitation in career choice where learners with visual impairments, upon completion of secondary school, could only pursue social science-related jobs such as teaching. R1 in FGD01 said the following:

Yes madam, we are taught the job which we can do and the job which is not possible for us, for example we can do teaching. It's very simple for a blind person to teach than to be a nurse.

This is consistent with what AFB (2013b: 1) stated that career life options are limited for persons with visual impairment as compared to their sighted counterparts. This study has established that learners complained that about limited career paths. The limitation resulted partly from limited core subjects which the learners were taking. School to Work Opportunities Act of 1994 (US Departments of Education and Labor, 1994: 3) recommended that in order to properly focus on career education needs learners and their parents must plan early to enhance smooth transitions. However, it is difficult to say whether parents whose attitudes are negative towards their child would really help plan career education. Learners in FGD01 reported that parents were segregating them and telling some of the learners that they were going to be nothing in life.

Social skills were mentioned as an area in which some learners received training. In FGD2, learners explained the specific skills within the social skills domain which they learnt. The skills were learnt either deliberately in a designed plan or coincidentally. The learners in FGD02 (R7) described social skills taught as follows:

> *In the subject, home economics there is tailoring, cooking and also table manners are there.*

Recreation and leisure for learners with visual impairments may be likened to physical education. An array of activities was mentioned by the learners and there were variations from school to school.

In FGD02, R3 mentioned that music and dance were programmed into the school timetable and was a normal event in the school. The sentiments are presented below:

> *Yes madam, according to where we are coming from, there is a band programme which takes place on Thursday. We play guitars, keyboard. That is what we normally do.*

Other activities in this skill area were music, debates, and theatre performances like drama. The activities were said to be part and parcel of the school recreation programme. However, there is need to teach more skills. Deliberate and direct instructions must be given to learners as early as possible so that they derive pleasure from activities their sighted peers enjoy as well.

The findings from university students showed that they were aware of ECC skills and that they were taught some skills. In terms of significance of ECC, an element of compensation for loss of sight was also mentioned. In his submission IP10 stated that ECC was a way of inclusion for learners. He stated that:

> *ECC are skills which at the moment allows inclusiveness of us who have problems like hearing impairment and visual impairments.*

This assertion is in line with the UNCRPD (2006. article 24,2b) which stated that "Persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live".

University students mentioned eight areas of ECC in which they received instructions. The only area not reported was self-determination. These findings are similar to the one by Lohmeier, et al. (2009b: 108) in which teachers of the visually-impaired and orientation and mobility specialists indicated that self-determination was among the least taught to the learners. The finding also agrees with the submission made by the learners in the schools.

IP4 mentioned skills in outdoor numbering and ascending and descending stairs while IP8 acquired skills in map reading. Independent travel is an important goal of orientation and mobility. IP2 brought out an aspect of training in orientation and mobility which was environment specific. She stated as follows:

> *There I was oriented how to walk without a cane and I was running everywhere. No wonder sister M was saying this one does not like a cane. Even the school where I am I move alone. I don't need a sighted guide. It's only here …. because of obstacles, vehicles and people.*

The scenario presented by IP2 showed a lack of transfer of skills to new setting. If IP2 was adequately trained, transferring skills to another unfamiliar environment would have been done without many challenges (McDonnall, 2011: 462). It was revealed that students had limited skills in orientation and mobility especially cane

skills. This was echoed by learners in schools who stated that canes were used for training purposes and not provided for daily use.

Social skills were mentioned as an area that some students were trained in. IP2 and IP4 brought out the issues that social skills learning was also associated or dependent on the stage of transition, in this case from junior secondary to senior secondary. The experience is described follows:

> *Yes, even social interaction. When I went to Mpo secondary which is inclusive, there also I leant one or two things. There I was exposed. I started trying to find my own way, I must say we were over-protected at junior secondary.*

This finding is in line with Wagner (2004: 4) who indicated that social competence for learners with visual impairments is key to development of positive self-concept, higher self-esteem, more assertive behaviour and being able to accept one's disability. It was found in this study that the demands of an environment compelled learners to acquire new social skills in order to fit in a social context. In fact, IP2 confessed that the way they were handled at secondary school did not offer transitional skills for them to adapt to new social environments; they were over-protected. For IP4, the experience is stated below:

> *The university, I can call it mainstreaming. Where visually-impaired and so called normal are educated together, I have learnt a lot of skills in terms of socialisation, social skills how to communicate, how to ask for help and the like.*

Recreation and leisure skills were widely mentioned as being taught in the schools. An array of activities was mentioned by students and there were variations from school to school. The activities ranged from sports, music, clubs, art and theatre. Recreation and leisure activities included competitions with other schools. This enhanced social interactions and creation of friendships.

Students mentioned independent living skills training that most students were given. Independent living skills include aspects such as personal hygiene and food preparation. It also encompasses time and money management, managing personal

belongings and space. IP4 brought out one area which is personal management when taught clothing identification. The following was his view point:

I learnt about how to identify clothes then how to locate landmarks in an environment when moving to and from my bed space, also the door numbering and how to ascend and descend stairs.

Independent living and life management skills were embedded in the subject called Home Economics. The most widely taught skills in the independent living skills area were laundry, cookery, cleaning and personal hygiene.

The communication styles of the learners comprise a large component of functional academic skills. learners with visual impairments may use one or more modes of communication. They may use braille, large print, regular print, tactile materials or they may use some in combination. This study found that students were taught different skills such as the use of braille and ink print. IP7 moved from ink print to braille and from braille to computers to do his work. The major factor was fluctuations in visual abilities. The participant shared the experience in the following manner:

I started using braille again in grade 10 term 3 because I was sick from January to July. In grade 10 term three I went to school and started using braille until Grade 12. Now I have changed again. For now, I balance them, braille and print.

Some learners were using more than one mode of communication. IP9, IP10 were trained in both braille and large print. This finding is similar to the one by Goudiras, et al. (2009: 115) where it was found that some learners with visual impairments were using more than one medium to read. In terms of increase in braille use with increase in educational attainment, students at university reported no increase in braille use. In fact, the higher demands in academic work compelled some of them to use other media to communicate such as computers, especially to conduct academic research, present assignments and take tests and examinations (IP7, IP9).

The study found that some students were exposed to assistive technology use in learning. Some talked about use of magnifiers while others talked about use of CCTV. However, some students talked about the lack of latest technology in their schools. IP10 mentioned that at school he learnt to use computers and magnification

devices. For IP7, the family was very concerned about his education and tried to help him learn to use assistive technology to access education.

A study by Kelly (2011: 235) found that high school learners whose parents were involved fully in their education were more likely to use assistive technology than those whose parents did not. This study made a similar finding. IP7 stated the following to demonstrate the role family played in ensuring that he had access to assistive technology.

> *The other one I can think of is assistive technology which I leant from home. There was a computer and they (family) were concerned. I could not use the computer due to too much light. I have a brother who is computer specialist. He looked for thunder software for narration. He used to teach me. I was using sight and also the narrator to assure me of what am reading. He used to teach. So as I was coming here I was already adapted. Coming here at UNZA I have more skills. Today I even install windows software for the sighted peers.*

Some students reported to have received instructions in career and life management skills. IP6, IP7 and IP9 appreciated the entrepreneurial skills such as carpentry, gardening and knitting. They felt that these skills get them to produce items for sale and earn an income. However, some students complained that they had limited career paths. AFB (2013b: 1) stated that career life options are limited for persons with visual impairment compared to their sighted counterparts.

5.3.1.2 Training in ECC

In a question to find out if the teachers were trained in education for the visually-impaired, particularly ECC, most of them indicated that they were not trained in teaching ECC skills to learners with visual impairments. This finding was quite serious because it meant that the teachers were not qualified to handle learners in ECC. Teachers without skills can actually not deliver what they do not have. This finding confirms the one conducted earlier by Boame (2009: 4) which showed that education of these learners lacks qualified personnel in the various fields or disciplines like academic, vocational and technical skills. The teachers' role is critical in the delivery of ECC. For them to effectively contribute to the teaching of learners

they need to be well-qualified. We could have assumed that the teachers received in-service training but this was not reported. The teachers must have foundations in general education, methodology, curriculum adaptations, must know how to assess and deliver instruction in ECC and other subject areas.

The training of teachers for learners with visual impairments was done at diploma (two years) and degree (where there was one course taken in an academic year and focused on teaching learners with visual impairments) levels. The courses offered at diploma level were mainly orientation and mobility, braille and low vision (TT2, TT3). The teacher trainers mentioned that the other skills in ECC were embedded in the three main courses. In as much as the teacher trainers mentioned the areas of ECC, these skills were not taught as stand-alone courses but embedded in the three main courses. At college level, besides training in ECC skills, trainees were given methodological skills and skills and knowledge in assessment of learners in order for them to develop individualised education plans for each learner. They also had an opportunity to practise teaching in a special school. The school teaching experience was for a period of three months. TT3 elaborated on this aspect as follows:

> *The main courses are braille, low vision, orientation and mobility. Under those we have components like devices, ICT they fall under these areas as content of the programme. There are 3 main course, braille, low vision and orientation and mobility. Activities for daily living (ADL) is under orientation and mobility. Assistive technology is in low vision. Braille stands alone.*

At university level ECC skills were part of content of a course called visual impairments in the four year programme (TT1). The course run throughout the academic year and ECC skills are just part of the main topics taught in the course. The teacher trainer (TT1) made the following submission on this matter:

> *Yes, we do train the teachers, but I think I must be very sincere we do talk about them. We do talk about this ECC but I wouldn't say we train the students to really use them. For example, in the syllabus or in the lecture plan we do have a topic on ECC we do have a topic on that. So we do talk about them maybe two there weeks. What we don't do is the actual practice of the actual areas we may mention under the ECC but we do really teach them ... ECC skills they come as part of the course content. Just as I mentioned we*

have a topic on ECC. As a way of breaking down, orientation is part of the course content apart from mentioning it in the ECC then we have time devoted to orientation and mobility, we also have time for assistive technology.

He indicated that the course has a topic on orientation and mobility and also assistive technology. TT1 further amplified that, at the university, there was a course which runs for one academic year where teacher trainees are taught how to teach learners with visual impairments.

At the university, braille, which is a skill under compensatory and functional academics, was taught the entire academic year to the trainee teachers. As a practical component of the course, braille skills seemed to be a dominant area in training teachers for learners with visual impairments. According to TT1, teacher trainees learn braille as a mode of communication.

In terms of short intensive courses in ECC, the university did not have such programmes while the college offered short programmes in the form of rehabilitation and other courses; all these were offered in collaboration with donors for serving teachers. For TT2, the institution offered rehabilitation for those who lost their sight suddenly. The programme, which lasted for six months, focused on orientation and mobility. There was also mention that the institution offered short courses in braille education. The views are presented below:

Yes, the college offers short programmes which run for six months. In the department of education for the visually-impaired, we receive serving teachers who may want to sharpen skills in braille. When they enrol they are given the basics in writing and reading braille. Furthermore, we also have a programme for six months for orientation and mobility. On this one we receive clients that become suddenly blind. They experience challenges. These come to our institution so that they can learn independent travel. Those we have taught learnt to move alone with white cane after six months.

TT3 had a slightly different position from that held by TT2 as she stated that the college did not have short courses running directly but they collaborated with other

partners that offered short courses in the northern region of the country. This was mentioned to be the only short course the college was offering.

According to Ajuwon and Craig (2007: 12) in-service training was one way of improving skills and increasing the number of teachers through intensive, face to face instruction. In-service training helps teachers remain abreast with skills like braille, assistive technology, making teaching and learning aids and the teaching of specific topics in the core subjects. The two institutions appeared not to be giving enough skills to the trainees in the area of ECC.

At university level, the trainer mentioned that orientation and mobility were just discussed and not practised. The curriculum specialist (CDC02) equally agreed that the methodologies in teacher training were inadequate. It is unimaginable how teachers can train learners if they do not have the skill themselves. Sapp and Hatlen (2010: 344) mentioned that teachers without ECC skills would most likely not transfer the skills which they did not have. The curriculum framework (2013) gave guidance on the nature of training for teachers of the learners with visual impairments.

According to MoE (2013: 50), colleges and universities are expected to offer specialised training in four main disability groups including visual impairments. This means that at college level the trainees take courses in visual impairments for three years, while those at university level concentrate on visual impairments for the duration of four years. This would give the training institutions enough time to comprehensively teach ECC skills.

5.3.1.3 Teaching and learning resources

Teaching and learning resources are a requirement in any learning situation. Resources for learners and teachers play a very important role in the teaching-learning process. With teaching aids learners are motivated and consequently learn better. Equally teaching aids, help the teacher clarify the subject matter more easily. Therefore, teaching aids can facilitate proper understanding for learners.

The questions on procurement and sourcing were answered in depth by the curriculum specialists. This was so because the curriculum development centre was involved in sourcing and distribution of teaching and learning material. A number of teaching resources came from other collaborators. Christoffel Blinden Mission (CBM)

was a strong partner in the provision of teaching and learning resources. Most of the Perkins braillers and vehicles came through CBM. Sight-Savers International also provided teaching and learning resources to schools.

The procurement of teaching and learning materials was centrally done after schools forwarded the lists of resources which were required. From the curriculum development centre, the materials were distributed to the schools. Some teaching aids in core subjects such as geography, mathematics and carpentry were provided by the school. Curriculum specialist (CDC01) had the following to say:

> *We have lists from school here. The number of schools in the country including the number of children in each school. Schools with more number of disability receive more equipment. That is one of the yard sticks but sometimes also the school heads come to offices we give them whatever we have.*

The finding of the study showed that there was a system of distribution to ensure equitable distribution. Schools could request items and these were issued depending on the stocks available. The curriculum specialist also stated that schools were expected to buy some materials as well. Schools received funding from the government to purchase items which may not have been given by the government.

In terms of teaching and learning resources distributed in the school the curriculum specialist mentioned quite a variety. He made the following submission:

> *… braille paper is one of the cardinal things we distribute, but we also have others like embossers. We have Perkins brailler as well. We have several types: talking calculators, we have distributed brailler rulers, some schools have even braille tapes … mattresses, wheelchairs, clutches and white canes and all that in the category of items we purchase, sometimes even buses for schools. Even funds … we also send funds.*

The teachers mentioned a number of teaching and learning materials available in the schools. They mentioned four main sources of materials. The main sources of materials included the government (through Curriculum Development Centre), donor agencies, the ones bought by the school and those made by the teachers. The schools also bought materials and the teachers indicated that they made some of the

teaching and learning resources. The curriculum specialists CDC01, CDC02 and learners attested to this.

From the learners' point of view the government, the school was the main provider of learning resources. They also reported that the school asked them to come with money to buy the braille frame and stylus (FGD01). The learners stated the following:

> *Madam we found them here.*

> *We are told to come with money then the school buys.*

> *White canes are provided by the government, school gives.*

In FGD03, R5 and R8 learners were aware that the materials they were using in the school were provided there. There was no place where they could buy these resources. This finding affirms the submission of curriculum specialist that resource for learners with visual impairments were not readily available in shops; either schools purchased them, or CDC or donors gave them to the schools. Some of the materials the schools gave to the learners while others remained school property for use in training only. The learner R8 presented the view point as follows:

> *The head teacher gives… They belong to school...There is nowhere to buy, they give us here.*

In terms of teaching and learning resource that were available in the schools, the learners mentioned quite a variety. In FGD01 and FGD03, the learners mentioned having braille-writing equipment such as Perkins brailler and styluses and frames.

In the area of orientation and mobility the learners talked about using canes but were quick to state that these were not enough. They equally mentioned that the schools provided materials such as soap, maize meal and knitting equipment to use in learning independent living skills. R6 in FGD03 put across his ideas in this manner:

> *When learning to wash, we use soap and water. For sewing, its needle, thread and scissors. Then cooking, its mealie meal and water.*

For recreation and leisure balls, music instruments and skipping rope were available. However, learners mentioned that these resources were insufficient; for example,

white canes were only used for training purposes within the school and not given for everyday use or to use during transition to other stages in life.

Another important component in training for ECC are the teaching resources that teacher training institutions had. The lecturers gave information on the status of teaching materials available with particular attention to sources of materials. TT1, TT2 and TT3 indicated that there were three main sources of training materials. These were the institutions themselves purchasing, donations from cooperating partners and the government through the Ministry of Education. TT1 stated the following:

> *Usually it is through administration. For instance, we write to state our needs like braille paper. The administration will procure that. But I can assure you sometimes it takes so long for some of those things to be attended to but basically, it's through administration … of course sometimes the Ministry of Education has come to our aid to give us materials. For instance, maybe where we don't have braille paper. Sometimes they will say come and get some braille paper. I think I would acknowledge that one.*

Non-governmental organisations were cited as another source of teaching and learning materials. Some resources from the agencies included braille production equipment. This source was mentioned at college level.

5.3.1.4 Policy governing the education of learners with special needs

Coming up with a curriculum is process which is usually guided by policy of the education sector. The study endeavoured to establish the policy governing the education of learners with special needs. To examine this, the following documents were analyzed: the Zambia Curriculum Framework (2013), Educating Our Future Policy (1996) and the United Nations Convention on the Right of Persons with Disabilities (2006). These documents were identified by the curriculum specialist CDC01and CDC02 as being the ones that speak to the education of learners and particularly those with special needs. The curriculum specialists, CDC01 and CDC02, referred to these two documents as being the guide to what is supposed to be taught to all learners including those with visual impairments. CDC01's views are presented below:

Policy guidelines, of course we have Inclusive schooling program policy that one it guides provider on how to go about things. We also have educating our future policy providing what is supposed to be done in special and inclusive education. So, we have policies and some of them say that Ministry of Education has a role to provide education for all learners with special education needs. And also, monitoring will be done by Ministry of education.

In a similar vein, CDC02 added that the Zambian curriculum framework is a guide for those who want to provide an education for children with visual impairments.

If you read through national curriculum, I think that is a guide. Some of these issues are contained there. What a child with a visual impairment should learn, those things are there in the curriculum framework.

However, the specialists did not state that the curriculum framework did not contain clear stipulations about ECC skills to guide users of the document.

According to the MoE (2013: 21), learners with special educational needs will require adapted curriculum and adapted technology and transcription of printed materials into braille. This would be an important aspect in the effective teaching of learners with visual impairments. However, this adapted curriculum mentioned was not outlined in the education curriculum framework to guide the schools on the skills and the time when these skills must be taught.

The curriculum specialists attested to the fact that the curriculum was not appropriate for learners with visual impairments because it was not adapted to meet their learning needs. Currently the Ministry of Education does not have this adapted curriculum in which the ECC skills should be found. The only curriculum which was available was the core curriculum, reflected in the curriculum framework of 2013. Ferrell and Spungin (2007: 14), Sapp and Hatlen (2010: 339) and Kalabula (2007: 13) stated that learners with visual impairments need supplementary curriculum in order for them to access the general curriculum. By adding the ECC into the learners' programme, the concept of the core is expanded.

The curriculum is formulated and implemented by stakeholders and experts in education. However, it was strange that the experts in the field of visual impairment had not come up with the ECC. The curriculum specialists mentioned that producing

a curriculum was a consultative process where stakeholder at different levels agreed on the nature of the curriculum for the country. CDC01 elaborated on the process of developing curriculum for learners with visual impairments as follows:

> *The formula we use is that a specialist in curriculum for visually-impaired. We design what we call Zero or first draft, now we call other stakeholders on board. We work with lecturers from the University of Zambia and Zambia Institute of Special Education college lecturers, some teachers in special education even from the main stream depending on the issue at hand … we try to identify the right participants, then we discuss. We discuss the paper that is drafted. We identify gaps in the initial paper and then people add and subtract, now that explains to us what we must do and for how long what we should do this, next year and the following years.*

Similarly, at implementation stage, there is collaboration. The CDC01 explained that there is a system in place for dissemination. The teachers are the implementers in the schools. He made the submission as follows:

> *Implementation Aha, its same thing at implementation. We work with stakeholders. If we want to get information from let's say eastern province, one individual cannot go round; we have to share the responsibilities. All stakeholders are involved, go to provinces, collect the information, come back then you sit down with a few and analyze data and then pass information to the teachers. Teachers will now implement what you have been working on (CDC01).*

In terms of monitoring, CDC01 mentioned that it is the responsibility of the Ministry of Education to ensure that the schools are implementing the right curriculum. He said the following:

> *Monitoring will be done by MoE to ensure that quality of education is enhanced. There are also circulars with that regards e.g. most of the schools being built are supposed to follow UNCRPD that wide should be wide enough toilets also. Most of the schools have to conform to these standards.*

Despite the seemingly clear responsibility, the Ministry has had challenges monitoring the curriculum being provided in the private special schools. CDC02

mentioned one school in the southern region of the country which is using a foreign curriculum. He admitted that there were shortcomings in the implementation or monitoring of standards. Indeed, when there are gaps in terms of curriculum framework, other organisations take advantage and offer skills which may not be in line with the government education policy. This is a matter which the Ministry can control by coming up with adapted curriculum in the area of visual impairments, embracing both the core curriculum and the ECC.

5.3.1.5 Curriculum accessibility

The study found that the majority of teachers were aware of the content of the core curriculum and that the curriculum framework provided sufficient guidance on what was supposed to be taught. However, a few teachers said that the curriculum was not clear because it did not provide instructions on how to teach learners with visual impairments. These few teachers showed that they were aware that the curriculum framework was not complete in that it did not have ECC components as well. The other issue that was not clear was lack of recommended types of curriculum for each disability group. This finding is similar to the submission of the curriculum specialist and confirmed by the curriculum framework document which does not mention the ECC for learners with visual impairments.

In terms of the suitability of the curriculum, the study established that teachers recognised the challenges learners had in accessing the core curriculum. Some of the challenges included lack of orientation and mobility and lack of assistive technology. The challenges are presented in Table 5.6 below.

Table 5.6: Challenges in accessing core curriculum

Orientation and mobility
Need for sight to learn skills
New curriculum has no materials
Inadequate time to teach
Too many responsibilities assigned to the teachers
No alternative form of examination
Inappropriate mode of material
Inappropriate activities

Interpretation of braille dots and writing
Lack of assistive technology

A look at the reasons or challenges showed that these were mainly due to lack of ECC skills which learners need to use to access the core. This finding demonstrated the relationship which exists between having ECC skills and being able to access the core curriculum. This finding agrees with the one by Ferrell and Spungin (2007: 14) as well as Sapp and Hatlen (2010: 339) who established that the visually-impaired learners need additional skills in order for them to have access to the general curriculum. Equally Kalabula (2007: 37) indicated that, in Zambia, visually-impaired learners require a supplementary curriculum dealing with activities for daily living, mobility and braille. These studies, just like this one, reiterate that academic achievement is related to having ECC skills such as orientation and mobility and use of assistive technology.

5.3.1.6 Aligned skills in the ECC and core curriculum

There has been a perspective that the skills in the ECC are also contained in the core curriculum. This has been the reason some educators felt that ECC skills need not be taught as a separate curriculum. The study sought to find out from the participants, especially the teachers, their experiences on aligned subjects in the two curricula. The specific issues here were teacher awareness of the link and the skills which were common in the ECC and core curriculum. Most of the teachers were aware that some skills in the ECC were contained in the core curriculum as well. When asked to state the nature of the link between ECC and core curriculum, the teachers had varied responses. In some of the responses, the teacher indicated that ECC skills enable learners with visual impairments to access the core subjects. One teacher stated the following:

> They interdepend on each other, they work hand in hand with one another…. Without ECC skills like braille, mobility and ADL the child cannot learn subjects like English, cannot go class, or personal hygiene…. The skills they learn in ECC are applied in the core curriculum. For example, large print can help them read correctly.

Without ECC skills, accessing the core curriculum would be a challenge. This was mentioned earlier on by the teachers when addressing the challenges in accessing core curriculum. Skills such as braille were linked to literacy in the subject English. Skills in orientation and mobility were linked to being able to go to class to learn core subjects. Equally another teacher said:

> *Some skills in core curriculum and ECC do link. Some subjects in core and ECC have same skills.*

The study found some common skills in both ECC and core subjects. Students IP1 and 1P7 mentioned learning cooking and entrepreneurial skills in Home Economics and Industrial Arts respectively. Similarly, IP8 stated that during physical education, recreation skills for the visually-impaired were taught. The link between the core subject, physical education and recreation and leisure was highlighted. IP8 said these words:

> *Recreation activities were in a subject called physical education.*

This finding was similar to the one from teachers and learners in schools. Another related finding was that the ECC skills found in core subjects were timetable. IP1 and IP7 had the following to saying about the issues:

> *Cooking not necessarily, with cooking we had a special class in grade 6-7 that's when they would teach you how to cook. It was a subject on its own, called home management* (IP1).

> *There was no plan for teaching self-support skills. The home economics was a subject. There was this subject industrial arts. We were being taught skills which can help us out of school. By today one of the skills I learnt is making plates using paper marsh* (IP7).

Similarly, Lohmeier (2009: 3) identified some of the links between mathematics and orientation and mobility; history and social skills; mathematics/science and independent living skills.

It may not be assumed that the ECC skills were not on the timetable because teachers were aware of the common skills. It has been established that there were various reasons why ECC skills were not taught and the issue of aligned subjects

was not captured among the reasons. In terms of subjects in the core which contained ECC, the teachers mentioned a number of these. The findings are presented in the table below.

Table 5.7: Common skills in both core and ECC

CORE SUBJECT	ECC AREA
Expressive arts	Orientation and mobility
Social studies	Independent living mobility
Integrated science	Activities for daily living, self determination
Religious education	Activities for daily living, self determination
Business studies	Independent living
Computer studies	Assistive Technology, visual efficiency
Literacy	Large print
Technology studies	Assistive technology
Home economics	Independent living
English	Recreation and leisure
Mathematics	Functional and academic skills

Table 5.7 above shows some area in the ECC which the teachers felt were also present in the core curriculum. The teachers married the core subjects to the ECC. This finding is line with Lohmeier (2009: 3) who found strong commonalities in terms of concepts in ECC and general curriculum. She identified some of the links between mathematics and orientation and mobility; history and social skills; mathematics/ science and independent living skill. Other specific examples of common concepts in the two curricula include working in groups (social skills); learning about different jobs (career education); reading a map (orientation and mobility); and managing money (independent living skills).

5.3.1.7 Personnel teaching ECC

The teaching of ECC calls for a concerted effort of many personnel including parents. The findings were that teachers were the main instructors in ECC. When asked on the personnel who teach ECC skills in the schools, the teachers indicated that they worked with other professionals. However, special teachers offered all ECC skills to the learners. Table 5.8 below shows the submission by teachers.

Table 5.8: Personnel teaching ECC skills in schools

Collaborator	Role/skills
Teacher	Orientation and mobility
Clergy	Social /moral skills
Optician	Visual efficiency
Social worker	Career and life management /social skills
Medical doctor	Visual efficiency
Special teacher	All the ECC skill
Nurse	Health skills/ disease prevention
Reproductive health specialist	Responsibility and assertiveness
Agriculturist	Methods of farming

In as much as they taught the skills most of the time in the school, they would on some occasions invite other professionals to give specific skills. The teachers, for example, invited medical doctors to teach learners how to manage their remaining vision. Similarly, a social worker would be invited to teach about career management and social skills. The collaborative approach as stated by the teachers was not strong because these professionals were invited once in a while to give a talk or demonstration or advise the teachers on some procedures. One missing professional on the list of team members was the orientation and mobility specialist. This meant that the teachers taught this specialised skill area alongside other ECC skills and the core subjects. This finding was similar to the one by Brown and Beamish (2012: 85) which found that teachers had multifaceted roles such as teaching ECC, teaching the core subjects, collaborating with general education teachers, supporting learners and administration.

The findings from teachers on the list of collaborators differed from the learners' submissions. The learners mentioned parents and house parents as some people who taught them ECC skills. Some learners attested that their academic and life achievement were partly due to the role parents played. To the contrary, teachers did not mention parents to have a role in the delivery of ECC. The scenario obtaining was that parents were unnoticed collaborators in the education of learners with visual impairments. The lack of recognition of the important role parents play in education of learners needs to be addressed. In as much as Lohmeier (2007: 33)

and Sapp and Hatlen (2010: 339) advise that parents should be involved with caution, a complete lack of parental involvement has negative implications for the overall success. Instead of leaving parents out completely, they should not only be encouraged to participate in the educational process, but the key roles they must play if their children are going to reach their full potential and their maximum level of independence must be clearly stipulated. AFB (2013c: 2) suggests that parents must be continuously educated to help them understand their child's needs and ways to best meet those needs in school and at home

The findings from learners on the personnel teaching ECC were that the teachers taught all the ECC skills. These views were submitted in the three focus group discussions; in FGD02, R9 said the following:

> *For mobility, madam, we are taught how to move. We had someone to move with us in the four corners of the school. I learnt mobility in grade 6. I was taught by my teacher Mr K. He taught us all the routes in the school.*

In echoing other learners R8 in FGD01 indicated that the class teacher also taught ECC skills as follows:

> *Mostly teachers like, activities for daily living, mobility … for ADL. There are some people who show us how to wash, cook.*

These findings show that beyond teaching core subjects, the teachers also gave instructions in ECC. This meant that the teachers taught this specialised skill area alongside the core subjects. The study established that learners also were taught some skills at their homes. The principle instructors were mothers, fathers, siblings and grandparents (FGD02). The skills identified to have been taught at home by the family members were independent living skills, recreation and leisure and assistive technology. One learner (FGD02 R5) mentioned that she learnt food preparation both at school and home. She shared her experience in the following way:

> *Yes, I can cook. I was taught by my mother at home ... the teacher also taught me.*

The findings from university students on personnel teaching ECC was that grade teachers were teaching ECC as well. For IP1, IP2, IP4, IP6, IP8, IP7and IP10 the

special education teacher taught all the skills such as sports, independent living skills and computer skills. An example of teaching core curriculum and more than one skill in ECC was given by IP2 when she stated the following:

> *Sr M. M taught me braille. She was a teacher of mathematics as well. She was helping those who were coming to the school after losing sight. In fact, there were two men and me.*

Similarly, IP4 mentioned that:

> *My class teacher Mr C taught me activities for daily living and braille. He was teaching all subjects.*

This finding from students at the university was similar to the submission of learners in special schools.

Learners also mentioned that they were taught some skills at their homes. The principal instructors were mothers, fathers, siblings and grandparents (IP1, IP5, and IP7). Here is what IP5 said:

> *Well most of the skills I learnt are mainly from home. Basically, I would point at mum, grandma and her sisters as people who were teaching me skills (IP5).*

Similarly, IP7 benefited from the active involvement of his parents in his school.

> *The other one I can think of is assistive technology which I learnt from home. There was a computer and they (family) were concerned. I could not use the computer due to too much light. I have a brother who is computer specialist. He looked for thunder software for narration. He used to teach me.*

The skills identified to have been taught at home by the family members were independent living skills, recreation and leisure and assistive technology. Lohmeier (2007: 33) and Sapp and Hatlen (2010: 339) indicated that parents may also be involved but should not take over the responsibility of professionals. There was a need to strengthen the home school collaboration in ECC skills delivery.

IP1and IP5 mentioned another staff member within the school responsible for teaching self-care and personal hygiene to learners with visual impairments. IP1 said:

> *These were house parents. Yes, we did learn self-care because we used to spend more time in school than home. We had house parents who were teaching us – they used to teach us how to bath, wash clothes.*

House parents are adults engaged by the schools to assist the learners with personal care and hygiene. They train learners how to clean and manage their space, laundry and bathing. This finding agrees with the one by Lewis and Mackenzie (2009: 482) who found that para-educators had an important role to play in training learners in ECC.

5.3.1.8 Delivery of ECC

At this point the issues related to delivery of ECC are discussed. Teachers brought out aspects of time or schedule of teaching. The finding of the study was that some teachers had time allocated and a schedule for teaching ECC in the timetable while the others said they did not have this. The variations in whether there was time to teach ECC skills was observed in the submissions made by the learners as well. However, in terms of teaching all ECC skills, most of the teachers mentioned that they were unable to teach all ECC skills during the normal school hours. The main reasons for failure to teach ECC were lack of time. The teachers reported three aspects in relation to time: First, was the lack of a set timetable for instruction. On the lack of timetable, some teachers said the following:

> *Time is inadequate because there are a lot of things to do…I don't have enough time.*

Another stated this:

> *The timetable for such is not in place. … It's done informally because they are taught at a teacher's will when he sees need….*

The second aspect was the learning characteristics of learners with visual impairments where the teacher needed more time to teach concepts before they were fully grasped. The third aspect was teachers having limited time to teach ECC

due to other responsibilities assigned to them. The deficiencies in the revised curriculum where ECC skills were not allocated time was another reason. Teachers stated discrimination of learners with visual impairments in the inclusive settings as another reason ECC skills were taught fully. Few teachers reported that they were able to teach all ECC skills. They attributed this to the school requiring strict adherence to the school timetable for ECC. Table 5.9 below shows a schedule for teaching ECC devised by some schools to ensure ECC skills were taught.

Table 5.9: Time and places where ECC skills were taught

TIME	PLACE	SKILL
Weekend	School	Social, recreation and leisure
Afternoon	School	Independent living, academic functional, assistive technology mobility, career and life management, social skills
Afternoon	Guidance room	Career and life management,
Afternoon	Dispensary	Visual efficiency
Weekends/Afternoon	Recreation hall	Social recreation and leisure
Morning/Afternoon	School/ hall	Independent living self-determination, social, career and life management
Evening	School	Recreation and leisure, visual efficiency
Morning	Resource room	Academic functional
Afternoon	Resource room	All ECC skills
Afternoon	Football grounds	Recreation and leisure, mobility
Afternoon	Road side	Orientation and mobility
Public holidays	School	Recreation and leisure
Afternoon	Grade class	Functional academic

Table 5.9 above shows that most ECC skills were taught in the afternoons and during the weekends after learner had learnt the core subjects in the morning and the weekdays. This finding agrees with the one by Lohmeier (2005: 129) who alluded to the fact that specialised schools go beyond school day hours to maximise the time of instruction. This study also established that all the ECC skills were taught within the school premises such as the school hall, guidance room, football grounds and the roadside. Some teachers scheduled the teaching of social skills and career and

life management as an activity done in the school hall during the morning assembly. This timing may not be the best because teachers and learners would have limited time because they would need to attend to the core curriculum as scheduled in the timetable.

The findings from university students on the issue of time when the ECC skills were taught were that some skills were on the school timetable while others were not. IP1,1P2, IP3 and IP5 mentioned that independent living skills, were on the school timetable, taught between grades 5 and 9 because these skills were embedded in the subject Home Economics. The following were the views:

> *With cooking, we had a special class in Grades 6-7 that is when they would teach you how to cook. It was a subject on its own, called home management* (IP1).

IP5 and IP10 submitted that braille was taught everyday especially between grade 1 and 4. One student, IP10, indicated that the school had time allocated for assistive technology lessons, especially the use of computers. For IP5, the schedule for independent living was that these skills were taught before going to class, as part of the daily routine. On the contrary some students, IP2, IP3, and IP8, stated that some ECC skills were taught without a schedule: skills such as orientation and mobility, visual efficiency, compensatory and functional academic braille in particular. In the case of IP7, the skills were taught by a teacher who felt the need to do so. He stated the following:

> *They were taught without a plan. They were just skills which the school maybe a teacher, was concerned. You find that when these are not on duty then the skills are not taught. But sometimes you find that other teachers are not on duty they will come and supervise to ensure that you get trained. So they never had any plan it was carried upon based on the concern which a particular teacher has.*

The submission by IP7 agreed with the teachers' submissions that ECC skills were taught by those who thought it was necessary to do so. This scenario compromised skills that learners would learn and showed lack of coordinated delivery. AFB (2013a: 2) theorised that insufficient time or lack of timetable for teaching ECC

impacts on the quality of instruction and also explains why some skills in the ECC were not taught.

This finding was in line with the submission of the learners in schools and teachers who indicated that the schedule for teaching ECC was not clear. The study showed that there some variations in the timing for teaching of these skills. The scenario could be explained in that the Ministry of Education had not time tabled ECC skills. It was the initiative of the school or the teachers to find space to teach ECC.

Time to teach a subject or study area is usually part of the main timetable. This is a case in the Zambian education system. The study endeavoured to find out from the participants the time in the school day when ECC skills were taught. Skills such as home economics, recreation and braille were reported on the time table. In the discussions learners said the following:

> *Yes, home economics, recreation there is a timetable*. (FGD01 R2)

> *My teacher, it was on the time table when I came in grade1 term two, I begun to learn to read and write in braille so it was on the time table. We were learning every day* (FGD02 R7).

Home economics is a subject in the core curriculum in which most skills in independent living area are covered. When learners reported learning independent skills, it was not taken as ECC skills but as a subject in the core curriculum which was examined as well.

In FGD01, learners submitted that ECC skills were on the school timetable. Orientation and mobility was more prominent in the lower grades between grades 1 and 5. FGD03 stated that some ECC skills were taught without a schedule: skills such as orientation and mobility, visual efficiency, compensatory and functional academic braille. The learners used the word "sometimes" which showed that there was no consistency in terms of timetabling for ECC skills.

> *Sometimes it was on the timetable, but this time ourselves we are supposed to help each other for writing.*

The finding of the study on the issue of the timetable was that there were variations on the schedules of teaching ECC skills. There was no clear timetable and it was the

discretion of the school to decide when to teach ECC skills. This was confirmed by findings from the teachers.

5.3.1.9 Methods of teaching

The methods used to teach ECC are an integral part of the process of ECC implementation. In a question on the methods they used to teach ECC, the teachers mentioned demonstrations or direct instruction, discussion, peer teaching, discovery and group work. Others that were mentioned are role play, question and answer, drill and practice and inquiry. The most prevalent methods used by teachers were discussion and direct instruction, where demonstrations were made to show the learners how to perform tasks. The discovery method was equally mentioned by teachers to be frequently used in instructions. The findings on these methods of instruction were favourable. However, these findings differed with the submission of learners who indicated that one frequently-used method was peer teaching. According to the learners, peer teaching was not properly done but learners used it as an initiative to help one another. Alberta Education (2006: 13) states that learners who are visually-impaired cannot learn these skills without direct, sequential instruction by knowledgeable people.

Students at the university mentioned various methods they were exposed to while in school. One strategy was drill and practice. In this method, there is systematic repetition, rehearsal and practice of concepts, examples, and problems in order to perfect the skills. A number of skills in ECC were mentioned to have been taught using drill and practice. One students stated the following:

> *Sr. M is the one who was teaching cane skills. Sometimes she would be in front and you are just following. She would explain the things in the environment and she would on the next day ask you to move alone, "you find me at grade 7B". So you start finding your own way until you find her* (IP2).

IP9 submitted that braille was taught by repetitive and close instruction and monitoring by the teacher. He stated the following:

> *Braille is taught on one and one learning. It does not require for a teacher to stand in front and start teaching. In fact, this is a subject on its own from grade 1 – 4. A teacher has to come on a desk and touch your hands and show you*

to say this is stylus and you have to put it here. So, you discover that for that time it might even take 6-7 minutes. The teacher is only one person because again you discover that a lot of our colleagues who are visually-impaired [and] we have a lot who are slow learners.

The study found that some learners were taught ECC skills using the guided discovery method. Guided discovery is a learner-centred teaching method which avoids the use of long explanations by the teacher. It takes place in problem-solving situations. Learners mentioned orientation and mobility, career education, assistive technology, social skills and independent and life skill as skills they learnt using guided discovery and excursions. IP6 described how this method was used to acquire skills in ECC as follows:

For mobility we have been just walking like that. They say we are going to such a place. We all go. Those who are feeling like they can't walk maybe sick remain. We just going while we are told where we are or are going to secondary school. They mention the place where we are or going to.

IP2 described how she learnt social skills through guided discovery method and excursions where the school authorities deliberately arranged visits and debate sessions with other schools.

The school organised visits by learners to other schools for purposes of interaction and creating friendships. Another way of teaching social skills was through activities like debate competitions. IP2 benefitted from a guided discovery that helped her to develop friendships and self- confidence. This also helped her develop self-confidence. The following was her submission:

Sometimes we used to go out to interact with other people like we went to, hmmm there was a school we used to go in a day. We used to interact with our friends. I remember in 2008 we went to Mpo basically just to go and interact with our fellow pupils. So, we went there to just interact. The other day we went to M secondary, and also school for the blind, to make friends. Sometimes we were involved in debate, we used to participate, following the rules, language and everything involved.

One area where demonstration as a method of teaching was used was in clubs. Clubs, though perceived as a leisure activity, were a place where IP9 learnt entrepreneur skills. Peer teaching was also mentioned to be one of the methods used to learn ECC skills. One aspect of peer teaching is where the older and more knowledgeable learners taught the younger ones how to perform certain tasks. This method of learning was reported by learners in schools too. IP3 described experiences as follows:

> *I learnt mobility again as I walked with my colleagues going to class I was mastering the environment.*

Learners in schools gave specific methods used to teach certain skills. Demonstrations or practicals were mainly used to teach independent and life skills, orientation and mobility, career and life management as well as functional or academic skills (FGD01 R5 & R7, FGD02). The teachers demonstrated the skills and then expected pupils for observe and repeat the skill. The learners reported the following experiences:

> *Through practical, then they say move from here to the gate. I could be paired with E and asked to take her to the gate then I leave E so that she can come back alone.* (R5)

> *Yes firstly he or she the teacher demonstrates then we do ourselves.* (R7)

Peer teaching was used mainly by pairing those who were older and more knowledgeable of the skill with those who were not competent. Peer teaching is a method of teaching where learners share skills and knowledge amongst themselves. In this method, learners who have the knowledge become tutors of their peers. learners with visual impairments received assistance with learning skills not only from their fellow visually-impaired but sighted peers were equally instrumental in helping those with visual impairments acquire ECC skills. Learners used this strategy to acquire skills in orientation and mobility, independent and life skills, functional or academic skills and assistive technology. In FGD02, learners taught one another orientation and mobility skills and braille skills. The wide use of peer teaching was connected to the lack of formal time to teach ECC. The peers in the dormitories became the main instructors in some ECC skills.

Discussion as a method was linked to practising the discussed skills. Skill areas such as orientation and mobility were mentioned by FGD02 and FGD03 to have been taught using this method. The discussion preceded practical or peer teaching. One learner in a discussion mentioned the following:

> *Braille, the teacher write braille on paper, then you study at home. Then when you return to class the teacher begin to ask questions then you return to class the teacher gets the papers and begins to ask questions. If you find the teacher tell you the right answer.*

The findings of the study on the methods used to train teachers in ECC showed that the following were widely used in the two institutions: lectures, peer teaching, group work, demonstration and practice, research and excursions (TT1, TT2, TT3). The lecture method was mentioned to be the most prominently used method used in teacher training. TT1 and TT2 submitted as follows:

> *The first one is the common lecture method where you lecture to them* (TT1).

> *Lecture method in this method we share with the students who are under training the skills that we have and they skills we know they can use, by merely giving them the main points through lecture method* (TT2).

Demonstration and practice were cited to be widely used to teach braille, and orientation and mobility (TT3). For skills such as braille reading and writing, a combination of methods were employed. These included lecture, discussion and practice. Research method as a method of teaching entailed the trainees working through assignments and writing a paper using tactile teaching aids. Excursions and research projects as methods of training were used to give trainees hands-on experience on the specific skill to be taught. Excursions, though a good method, were rarely used in the university due to logistical challenges. The lecturers in institutions where learners with visual impairments were educated rarely took students out to have hands-on experience. TT1 mentioned the following:

> *The fourth one is using excursions where maybe, although we have not done this in a long time, it's one of those methods we have used before where you take a few students and visit the school for the blind. If we are not able to do, we give students tasks that will require that they visit a school for the blind.*

Visits or tours to institutions and facilities providing services to person with visual impairments is a way of cementing the concepts discussed in the lectures. It is also an opportunity for trainee teachers to acquaint themselves with information which they can ably share with other collaborators such as school administration and parents. Research by Zhou, et al. (2011: 205) showed that most teachers lack information to give to learners and collaborators. They did not have information about training resources, supportive agencies, manufacturers or vendors of assistive technology. Through excursions and visitations, teachers would have information which they could ably share with other collaborators. Loreman, et al. (2007) cited in European Agency for Development in Special Needs Education (2010: 29) concludes that if pre-service teachers are expected to develop positive attitudes towards inclusive education, they need opportunities for direct interaction with people with disabilities, instruction on policy and legislation relating to inclusive education, and opportunities to gain confidence in practical teaching situations with students with disabilities.

5.3.1.10 Collaboration

The CDC collaborates with other stakeholders in curriculum related matters. The major stakeholders were the teacher-training institutions and the schools for learners with visual impairments. Others were donor organisations, the Agency for Persons with Disabilities and United Nations agencies such as UNICEF. All these partner with CDC in curriculum formulation, supply of teaching and learning aids and in training of teachers for learners with visual impairments in collaboration with other stakeholders in curriculum-related matters. The curriculum specialist mentioned some of the areas of collaboration. In the first place, curriculum specialists acknowledged the power of collaboration in the curriculum process. CDC01 attested to this in the following words:

> *You know this department as a curriculum specialist. In some case your role is facilitation, try to identify people you can work with and put heads together then the work can be done very well there are people that are on the ground … who are really practicing. Bring them to the workshop then they discuss till we agree on what must be done … We collaborate with the University of Zambia and Zambia Institute of Special Education especially on policy*

matters. In some cases, even at policy sometimes we have involved head teachers.

The Ministry of Education has been working with the colleges and the schools for learners with visual impairments to design curriculum, syllabus formulation and even write books for learners with visual impairments. Other collaborators as indicated below by CDC02 had specific roles. The Zambia National Cultural Centre for the Blind was responsible for rehabilitation of people, particularly learners and teachers who lost sight in adulthood. The other partners in education of the visually-impaired were CBM, Zambia Open Community Schools (ZOCS) and UNICEF. These collaborators focus mainly on the areas of rehabilitation, teacher training, resource mobilisation and community sensitisation. CDC02 made a submission in the following words:

> *CBM (Christoffel Blinden Mission), is also very [helpful] in teaching/learning resources. Most of the Perkins braillers, vehicles came through CBM. They are also training out of school youths in skills like computer. There are youths doing that program here at CDC, so that when they go out they can train others … Zambia Open Community School. They are also spearheading inclusive Schooling in community schools.*

The finding showed that CDC had already existing partnerships in the area of visual impairments. The study found that teacher training institutions did have some form of collaboration with other partners. The Ministry of Education was identified to be the main partner with the role of facilitating training of teachers by allowing trainee teachers to practice in government schools. The Ministry was also the main employer of the graduate teachers. The CDC collaborates with the colleges and the university in curriculum design and syllabus development for learners with visual impairments (TT1, TT2). Lecturers from the two institutions participated in curriculum development for learners with visual impairments.

As for curriculum development centre the teacher trainers singled out their contribution to curriculum development in braille through syllabus development for learners in the schools. TT2 expressed views on how the college collaborated the CDC in curriculum development in the following way:

We do work in liaison with each other (CDC), especially the past 3-4 years they have been working on programs on how to teach braille from grade 1 - 7. So, we have been working together in that area knowing that we also have a similar program her. So, the purpose is that while they develop that they also know that we are also developing teachers that will be able to handle what CDC is developing, so some collaboration of some kind anyway.

The curriculum development centre equally provided the two institutions with materials such as braille paper and embossers. Other collaborators were donor agencies such as Sight Savers International whose contribution was in provision of assistive technology to students with vision problems in the college and also sponsoring students for in-service training in visual impairments. The college had been involved in community service programmes where working with other partners, it trained teachers in ordinary schools on screening learners for vision loss and intervention. Despite these seemingly good strides, the collaboration between the Ministry and the University was not well-defined particularly in the area of training teachers for ECC. There was a need to strengthen the collaboration between the training institutions, government and donor support organisations.

One finding in the delivery of ECC was that the home and school environments played complementary roles in the successful teaching of ECC skills. IP1, IP4, IP5, IP7, IP8 and IP9 mentioned that the schools collaborated well in teaching independent living and life management skills. The case of IP7was outstanding in the sense that the learner mentioned deliberate and coordinated teamwork between his parents and the teachers to ensure that he learnt the skills. He described his experience in the following way:

I think home they contributed with the help of the school. Meaning at school they would give them a tip, to say this is possible, and then home they would ensure the ability is trained. Like when I lost sight, at home they wanted to start keeping me like a baby, whereby they wouldn't want to involve me in anything but at school they said no. I needed to be involved in activities that others were doing. Let him get involved, he will need the skills later. So, at home they made things happen; by the time of going back to school I learnt the skills.

In this case the school took up an advisory role. By sharing notes and ideas, the school and the home helped the learner acquire the skills necessary for life. This finding agreed with the assertion by AFB (2013c: 2) that parents of children who are blind or visually-impaired need critical information to fulfill their natural role as their child's best and only lifetime advocate. Parents should not only be encouraged to participate in the educational process, but the key roles they must play if their children are going to reach their full potential and their maximum level of independence must be clearly stipulated. For IP9, the parents were at centre of helping him learn self-confidence and social skills. He talked about the "freedom" he learnt early in life because parents allowed him to play with sighted peers and he never felt any different from his friends because they accepted him as a boy with a visual impairments. He elaborated in the manner below:

> *First of all, I can say this came from my own parents the way the freedom they used to give me they never let me be like any other person she made me especially my mother I was brought up by my step father she made to play around even come back at 19hrs at home even moving around with my friends. I think from that background I had that freedom because I could see that even when I was at M School for the Blind when we were young, I could see my fellow blind who couldn't even walk in the environment.*

Quite often, parents' over-protective behaviours negatively affect children with visual impairments because of limitations imposed on play and exploration of the environment. IP9 mentioned that because of the freedom he enjoyed at home and in the community, he did not experience challenges when transitioning to secondary school. AFB (2013c: 2) states that parents need to be provided with knowledge and skills to understand their child's needs; when that happens, they will be in a good position to know how to support the child's learning both at school and home.

5.3.2 Relationship between ECC, Academic and Life Achievement

The acquisition of ECC skills has been linked to a number of positive outcomes in the lives of persons with visual impairments. The participants linked ECC skills mainly to academic achievement and life transition, employability and economic

empowerment, communication, academic success and social inclusion as well life management.

5.3.2.1 Academic achievement and transition

The findings of the study were that ECC skills were related to academic success of learners with visual impairments. The curriculum specialist observed a direct link between ECC and core curriculum. Here is his submission:

The aim is if they can excel in braille then they can apply that braille in other content subjects or core curriculum. Orientation, a child coming for the first time in school, how will he know where the head teachers' offices are, the dormitories, lavatories, dining [room], so they need to be taught how to know the map of the school or whatever they are living, so orientation is an important skill in the school, especially the early grades, first few years they have to be taught a lot on how to manoeuvre.

This was confirmed by teachers, teacher trainers and the learners. The relationship was that, with ECC skills, learners would manage to access the core curriculum and manage their academic assignments.

Findings of the study from the submissions from one of the teacher trainers was quite elaborate. It was based on his experience as person with visual impairments. For TT1, having skills in ECC could determine whether someone continued with an academic programme or they dropped out completely. For TT1, the training in effective use of ECC skills was a determinant of success or failure at tertiary level of education. He described how assistive technology and mobility skills helped him excel academically as follows:

I attach a lot of value to ECC …. I know how it contributed to the welfare of my education. When I went to Nkrumah … So I reached and the only thing I was able to interact with was braille. Then my lecturers said we don't know how to read or write braille, what are we going to do? Two months down the line the lecturers and the administration agreed to send me to another college, "we can't help him here". When I learnt to use a typewriter that's how I was saved from expulsion. So, imagine I passed through that tormenting time because someone didn't do a good job at primary. When I moved to the computer I

discovered that I could get information even when I didn't have hard copy books. I go for the internet…. so that instead of writing braille, which can be read by less than 1% of the population, I can go to a computer.

The submission from TT1 highlighting the role ECC skills played in his transitioning from secondary school to college was a clear demonstration of the role of the skills in the life of a person with visual impairments. TT1 brought out the issue of how transitioning affected the use and relevance of ECC skills. From this submission, it is evident that academic requirements and institutional set ups influence and can dictate the kind of skills necessary at a given time. Advanced level of work and a lack of staff to read braille in the college compel students to use advanced technology to do work. Having basic ECC skills was also found to be important. This became a foundation on which further development of skills was done. This finding was in line with the assertions by Trief and Feeney (2003: 142) and McDonnall and Crudden (2009: 330) who stated that levels of teaching these skills would depend on whether the learner had previously acquired some competence and also the demands at a particular stage of transition. If a learner acquired keyboard, orientation and mobility and braille skills at primary school, she/he may just need to perfect these at secondary level and increase speed as well accuracy in college or university.

A study by Wolfe and Kelly (2011: 346) equally established that there was a strong relationship between receipt of instruction in ECC-related content such as use of assistive technology, orientation and mobility, self-determination and employability and success in college, employment and engagement in social activities. The study further found that with academic transitioning, the level of use and requirement of ECC skills differed. Trief and Feeney (2003: 131) theorise that transitioning from school to college can be a time of uncertainties and challenges because the learners move from an environment of having much support to being alone. The level of demand for ECC skills during transitioning depends on previous teaching of skills and the demands of a particular stage of transitioning. For learners in Zambia, transitioning from junior secondary level to high school requires advanced use of compensatory and functional academics skills and orientation and mobility. At senior secondary level, the academic demands become intense. However, it is at this level where learners with visual impairments are put in inclusive classes, where the teachers of the core curriculum are not trained in special education. Placement in

inclusive classes entails minimal support for learners as well. This calls for use of higher technologies such as computer for learners to learn. TT1 who has a visual impairment shared his experiences in the following way:

> *One thing that helped me was my ability to walk alone from my hostel to the classroom. …because once a blind child understands very good example, orientation and mobility imagine he is able to walk alone from his hostel to the classroom that already will give him empowerment. It is an empowerment strategy…... Any of those things will greatly provide independence to the child who is blind and that becomes very important because access to education becomes easier as a result of acquiring adequate ECC skills.*

In the special school, learners in FGD01 and FGD03 mentioned the role that ECC skills played in academic life. The use of braille contractions enabled them to finish assessment tasks early. In FGD03, R10 stated that skills in braille were important for academic success. He said:

> *Braille helps me so that I pass when I do contractions. I don't use a lot of paper when writing a letter. I also finish early like in examinations.*

University students shared their experiences on the role ECC has had in their academic life and particularly the point of transitioning from secondary to tertiary level. The findings of the study were that ECC skills were related to academic success of learners with visual impairments. The students reported improvement in many ECC skills they had before university. These included mobility, use of assistive technology and social skills. They mentioned three main areas where ECC skills had been prominent. These were access to information, the transitioning from braille usage to embracing assistive technology particularly computers and the related software (IP7, IP9, IP8, IP1, IP10, and IP3). The submission by IP9 is presented below:

> *Well, I came to learn to use a computer in the year 2012 by the time I was 28 years old and it came to pass that the place I was teaching. I found it very segregative because no one could accept the issue of braille and I could find it difficult to write notes so I had to use some pupils who I saw were very good*

at computers and went on the internet and cracked on certain programmes which was very … helpful.

The skills in AT use were observed to be learnt or became improved at tertiary level. It was at the time of entry into university when most learners with visual impairments experienced the demand to learn to move from dependence on braille to do academic work to use of computers and related software for learners with visual impairments. IP1, IP7, IP8, IP0 and IP10 learnt to use the computer for research, studying and writing assignments. Tertiary education in particular at university level requires students to do research and write academic papers. A lack of referencing materials in braille and large print for learners compelled these learners to learn how to use a computer. The students also had to acquire skills use of the internet in order to conduct research and write academic papers. As IP7 and IP9 explained, they had been using braille from grade 1 until tertiary education level where challenges became numerous and one way to overcome these was to learn to use a computer. Besides skills in compensatory and functional academic and assistive technology, another finding of the study was that students learnt time management, study skills and academic writing skills (IP1, IP6 and IP10). IP1 stated the following:

I have learnt responsibility, to be responsible. I have learnt the skills of studying and reading because it was really different at high school, teachers can push you to study, put on timetable, push to do thing but here you have to do that on your own. I have acquired new skills of communication. In high school I used ink and braille but here I use the methods of typing.

IP2, IP4, IP8 indicated that mobility skills were seen to be influenced by transitioning from one environment to another. IP2 mentioned this to illustrate his experiences:

Mobility has remained the same. I am still using guided sight. The environment is not allowing us to move alone, the vehicles are all over. Even the infrastructure is not conducive……yes even those who learnt at school still have challenges. I remember one time I was with my friends, M and D; we found a lot of vehicles at humanities we tried to find our way but it was difficult.

5.3.2.2 Employability and economic empowerment

Employment opportunities for persons with disabilities have been related to acquisition of ECC skills. Having ECC skills has been directly linked to higher chances of getting a job and successfully managing it. The study found that skills especially assistive technology and compensatory and functional academics were avenues to becoming employable and economically empowered. CDC02 stated that ECC skills such as computer studies and braille proficiency could gain persons with visual impairments jobs. Here is the submission from the curriculum specialist:

Yes, in the new national curriculum framework. Meaning apart from learning braille for use as visually-impaired, also learn braille as a subject even become an expert to teach others in case they want to teach braille they can use that certificate…. previously the VI were employed as telephone operators, now they have tried to find a way of being employed in the civil service. One way is by learning computers, the other ones go for teaching.

The curriculum specialists indicated that skills in AT put learners with visual impairments at a competitive level with their sighted counterparts when looking for jobs in the public sector. The introduction of braille as a subject to be certified gives the learners further opportunities to be braille instructors.

Teacher trainers mentioned that having ECC skills such as assistive technology has been proven to help persons with visual impairment get employed and maintain jobs. TT1 gave an example of high profile professions such as lawyers and bankers which were held by persons with visual impairments. The following is what he submitted:

Exactly, Zimbabwe has 11 blind lawyers; that is our neighbour with a lot of challenges. In South Africa, they can't even count [them]. They have blind bankers. I had a chat to find out how they do it. They depend on the computers. Government supports them so that they are able. It comes back to ECC. I have a special heart for the ECC and I speak with passion because I know how much it helps a blind person.

An equally important aspect in the submission was the acknowledgement that for success in the examples given, government support was crucial. With government support for both the employer and the employee with disabilities, jobs can be

secured and therefore the employees can fend for their families. The teacher trainer (TT2) had this to say:

> *Our concern has been on the totally blind trainees. These need ample time to be given to them. As you may be aware these are skills which will make them productive individuals tomorrow.*

This finding is similar to the one by McDonough, et al. (2006: 597) who established that good command of both ECC and academic subjects equips one for competitive work and contributes to the economy of the country. Another finding was that use of assistive technology and self-determination were linked to successful employment and deciding on issues of deployment (TT1, TT2). This finding is in line with Malakpa (2007: 1) who stated that empowerment of persons with visual impairments leads to reduction in unemployment, reduction of dependence and raises community recognition of persons with visual impairments.

In FGD01 and FGD03 learners mentioned skills from recreation and leisure, music and sports which could bring about economic empowerment. The ability to grow crops as reported by R8 in FGD 01 showed that with good training in ECC, learners could become self-sufficient, feed their families and contribute to national development. In FGD01, R7 said:

> *Such skills … help me to be healthy and how I can do helpful exercise then when I can continue using maybe it will bring me some foreign exchange such as if I continue to play football, go ball or net ball, maybe I will be a person in a country.*

Employment challenges for learners with visual impairments have been documented. Students at university submitted that some ECC skills were a source of revenue while others could make them employable. Skills especially in independent living and assistive technology were reported to be avenues to become employable and economically empowered. IP9 and IP8 stated that ECC skills such as computer studies, laundry and braille proficiency could gain persons with visual impairments jobs. In the case of IP8, recreation skills in music became a source of money and fame. He made the following submission:

I benefited from this. Most of the pupils had that skill of music and also cultural things like drums, also piano and keyboard. We even produced an album in 2003.

The ability to grow crops as reported by IP10 demonstrated that with good training in ECC learners can become self-sufficient, fend for their families and contribute to national development. This finding is similar to McDonough, et al. (2006: 597) who established that good command of both ECC and academic subjects equips one for work and national development.

5.3.2.3 Communication, academic success and social inclusion

Being part of a community is an important element in every society. For people to feel part they need to know how to interact with other members. Social skills and ability to communicate help people accept others and also become accepted. Communication has also been viewed in terms of being able to read and write in braille to communicate to with other people. The study found that the ability to engage in correct social interactions was related to academic success.

The teachers mentioned the benefits of ECC skills for learners with visual impairments and that academic success and ECC were related. Teachers mentioned that ECC allows the visually-impaired to become independent learners who will not solely depend on others for guidance. Acquisition of ECC skills was also said to be a tool for learners to access content in the core curriculum. This study confirms the finding by Wolffe and Kelly (2011: 346) that there was a strong relationship between instruction in ECC-related content and employability and success in college. This means that learners who have good skills easily adjust in their work and academic life.

Another finding as reported by the teachers was that ECC skills were linked to learners' ability to socialise and manage relationships. A teacher made the following submission;

ECC help them interact positively in their communities. They learn social skills which help them to know how to stay with people, how to socialise.

Teachers talked about positive social interactions as something essential to fit in community. DeMario (1990) cited in Ajuwon and Craig (2007: 12) states that employers value employees who have good communication skills, who also get along well with co-workers and have positive attitudes. Equally visually-impaired persons who received counselling and took part in group activities with sighted peers had greater gains in self-concept, more favourable attitudes towards their disability and a more internal locus of control than their peers who did not receive training (Cavenaugh & Giesen, 2012: 409). This finding agreed with the submission by teachers that ECC skills were important for development self-confidence to join good professions.

Teachers mentioned that training in ECC fostered independent living. Independent living skills such as personal hygiene and time management were related to ECC skills. Independent living was also linked to reduction of dependence on others for support.

> *They learn to live independently. Make them acquire broad knowledge and live independently.*

Teachers also linked ECC skills in sport and music to be a vehicle to self-employment and self-reliance.

> *ECC also helps them to develop certain skills which in turn makes them earn a living, for example sports and music.*

This relationship was reported by learners and curriculum specialists. The findings on the relationships among ECC, academic achievement and community life was significant. This should help the teachers find ways to engage stakeholders to plan the best way forward in the delivery of ECC.

The submissions by the teacher trainers, TT1, TT2, showed that skills such as socialisation and technology use enhance confidence and skills in the visually-impaired to become active members of society. TT2 stated the following to show that ECC skills were important for inclusion in the community:

> *… without ECC skills most visually-impaired people would be isolated. They will not be productive in any way. The sighted easily learn some of these*

skills. How to socialise, use the technology by use of sight. The adoption and implementation of curriculum in ECC will assure the students an opportunity to function well and compete in the community. In as far as ECC is concerned from my own experience, without ECC skills most visually-impaired people would be isolated. They will not be productive in any way.

The submission of TT2 agreed with the findings of Cavenaugh and Giesen (2012: 409) and Ajuwon and Craig (2007: 12) who established that acquisition of social skills by learners with visual impairments improved acceptance by sighted peers. If social skills are not taught they do not develop appropriate socialisation, daily living, and independence in adulthood, which causes them to have fewer or no friends more often than is the case with sighted children. This research evidence is in agreement with the submission of TT1 below:

The adoption and implementation of curriculum in ECC will assure the students an opportunity to function well and compete in the community. That one am so sure that the visually-impaired can benefit from the skills covered under ECC.

In FGD02, learners mentioned that doing what everybody else does in the community was important because it reduced isolation of persons with visual impairments. The submission of R3 is presented here.

Thanks to what R9 was saying. For some people if you don't know how to do what other people are doing you are going to see that maybe you are neglected. There are many obstacles we face from our people, that is why these problem we face are the ones that cause us to learn these things. These things are important because what you do, each and every one is going to be happy to sit with you. Yes madam, that's what I can say.

This finding agreed with Kelly and Smith (2008: 538) who stated that an expansion in social horizons and having good independent skills reduced isolation. It can be deduced that social competence, success in post-secondary training and positive communication skills through assistive technology were related.

The study found that transitioning to the university improved their social skills (IP1, IP4, IP5 and IP10). The ability to engage in correct social interactions was related to

academic success. Transitioning to university improved their social interaction and positively influenced acceptance in social circles. Social competencies such as being polite, making friends were important ingredients for success (IP1, IP3, IP7 and IP9). The ability to communicate through phones, emails and writing letters in braille were viewed as skills that helped maintain friendships and academic communication with both peers and lecturers. Wolffe and Kelly (2011: 347) stated that social skills are essential if learners are to develop friendships with their classmates and participate in activities typically associated with school-age learners, whether educational or extracurricular. University students shared a lot of information and one has to have colleagues and friends to achieve this. Sometimes referencing materials are only available in hard copy, and students with visual impairments have to seek help from others. The university has had a tradition of placing notices on notice boards dotted all over the university including halls of residence. This is a very common mode of communication and works very well for sighted students. For students with visual impairments to access this information, they need someone who knows their courses and interests for them to get to know what is placed on the notice boards.

> *Other technologies I have embraced, for instance press, what I mean by press is a mode of communication I found in the university people don't go around announcing what is happening but they only stick on the notice boards and you just have to go there and read what is there but for instance in our case we usually have assistance from other students for us to get to that information on the notice board.*

IP1 called this, a technology of communication in the university and indicated that for the communication to take place, he used sighted friends to read the notices or inform him. The other finding was that students at tertiary level found inclusion was a significant part of the learning process and the social skills either improved or they learnt new ways of interacting with others to become part of the community. For IP9, the cane skills he learnt were serving a new purpose in the university environment: identification. Social skills helped students to develop self-control and also learn the correct behaviour in the given community. IP2 mentioned that social skills helped her to manage emotions in order to fit in study groups where there were sighted peers.

Here is what she said:

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Yes, it was effective, because it helped us cognitively, thinking of where to go. For social skills, they should teach the visually-impaired to interact because it can help in self-control and also learn other skills by observing what others are doing, in terms of punctuality and following others. Even the responsibilities like group work with other sighted peers, then you are given also responsibility to do something.

One gets the understanding that most of the students at university encountered social challenges and needed to acquire new social and communication strategies for them to remain afloat the academic circles. The social skills learnt before university entry helped the students to adapt in a socially complicated environment.

The study found that life management skills were viewed to be related to transitioning and a way to prepare for the future in the event that parents died or in a case where one was abandoned by the family. Beginning life alone without parents could bring about uncertainties. ECC skills teaching was seen as a form of empowerment that parents were expected to provide in order to secure the future. In FGD02, R7 mentioned that:

Learning skills depends on the villages where we are coming from. There are some parents who do not teach skills. Many parents do encourage us to do what the sighted people can do. The reason am saying that is that those parents you won't stay with them forever. These parents can abandon you. If they did not teach you some other skills, so if they happen to abandon you how can you live?

With good life management skills, a person is able to live independently. ECC skills were seen to be a source of pride for the learners and helped boost self-confidence and esteem.

In FGD02, R9 indicated that ECC skills are "life", and they needed to be taught for independent living without guardians or parents. The ECC skills were also said to be a source of pride for those who were able to do things for themselves. Learners mentioned skills in mobility to independent living skills such as food preparation and laundry. R9 stated the following:

What I say on mobility I asked someone to show me the market, someone told me that in this school everyone has eyes and legs to move. From that time, I begun to learn to go to the market alone because they are a big challenge. People here differ. That is why mobility it is good madam that cooking, washing are learnt properly. Some of us we are cooking nsima we put the pot on the fire, when the water is warm we get put a stick in water and put a drop on the hand. That is when I put mealie meal. That is how we learn in life.

In the above submission, the learner demonstrated that orientation and mobility skills were related to independent living as well. This finding is related to the ones by McDonnall (2011: 462) where it was established that good orientation and mobility skills are highly correlated with the degree of independence achieved by learners later in life. Developing body awareness, directionality, spatial awareness and practical knowledge associated with the characteristics of a given environment increases the probability that learners will be actively involved in age-appropriate activities with peers.

5.3.3 Challenges in the Delivery of ECC

A number of challenges have been identified by the teachers. They are summarized and presented in Table 5.10 below.

Table 5.10: Challenges faced by teachers in the delivery of ECC

Lack of teaching and learning resources. We do it out of passion
Lack of time, since ECC is not on the time table. Time table is packed with core subjects
Inadequate trained human resource especially in orientation and mobility
Some materials cannot be modified
Lack of support from fellow teachers, administration by not buying materials
Inadequate syllabus for ECC skills
Learners have negative attitude and hate repeating skills to perfect them
Too large classes

5.3.3.1 Attitudes

Attitudes have capacity to influence the success of any activity or programme. Poor attitudes were found to be a hindrance in the delivery of ECC skills. This was also reported by learners and teachers. The curriculum specialist (CDC01) stated that teachers who may have been trained in special education opt to go into ordinary schools or get other jobs due to lack of motivation. Their attitude towards teaching learners was generally poor and this affected the teaching of ECC skills such as braille. The curriculum specialist stated as follows:

We have challenges with our teachers. Also high attrition rate in special schools. They get a job but within a short time they go to other schools so there are a few teachers within the schools; maybe they are not well motivated. We don't know because in the past, children even at early grades they use to know braille so well but this time the braille skills are going down.

One reason to explain the negative attitudes of teachers was that teaching ECC is quite demanding and teachers required incentives from the government. Previously, special education teachers were given an allowance, about 30% of their income to motivate and reward them. This was discontinued in 2012 and teachers have complained that they cannot spend much of their time teaching learners with special needs, and ECC in particular without an incentive. Ncube and Hlatywayo (2014: 76) found that 67% of school heads face problems in recruiting specialist teachers to their schools citing non-availability, refusal by some to take special classes, centralised recruitment systems and poor incentives. When retaining or attracting teachers to special needs education was challenge, the researchers suggested that deliberate efforts must be made to support teachers by way of motivating them through incentives.

The negative attitudes were equally noted in the procurement of materials for special-needs children. CDC02 indicated that the purchase of teaching and learning resources was not smooth and took extended periods of time. There were attitude challenges associated with the purchase of the resources. The curriculum specialists cited challenges such as requested resources not being purchased. This showed failure to set priorities when sourcing materials especially in that at planning stage

needs of learners with visual; impairments were not prioritised. The other challenge was procurement being done after a long period of time, and a lack of personnel to transcribe text books. CDC02 had the following sentiments that planning mainly focusing on regular learners:

We need to sort out the issues of teaching and learning resource. What we have in mind when preparing it; is a regular child. When we are asked, it becomes a 'by the way' thing. We need to begin with the most vulnerable, right now there are no books in braille or adapted. When in a meeting they are barely reminded. We need to be reminding people every day about special needs.

The poor attitude towards special needs in general affects the delivery of materials for learners with visual impairments as well. As CDC01 mentioned, there have been no text books for core subjects in braille since 2003. For over 13 years, the distribution of text books printed in braille has been non-existent. The lack of textbooks in the correct medium greatly affects learner participation in academic life and overall academic performance. Equally, the higher offices had to be reminded to include issues of special needs even at the stage of printing materials and curriculum formulation.

Learners reported that they experienced segregation and rejection in terms of accessing core subjects and also in socialising with peers. Some teachers were unfriendly and not helpful because they expected the learners with visual impairments to have learning styles like the sighted peers. In FGD03 (R9) said this about his experiences with a teacher:

On the side of teachers, I tell you it's not easy. I was not happy with the answer I got, the teacher said I am not supposed to be here but at M school to learn with the deaf. But I couldn't go there because I won't see sign language. Most of them don't like us like they say they would get the disability. But in the dormitory for the boys, some help while others don't want and we leave them. Normally we need help on this.

In the case of learners in the special schools, the main challenge came at grade 10 when they transitioned into inclusive classes. The setup of the special schools for

learners with visual impairments in Zambia is such that from grade 1-9, the learners are exclusively educated in special schools. When they qualify for grade 10 which is senior secondary, they join the ordinary classes in form of inclusive settings. The special school running from Grade 1 to 9 and the secondary school section operate in the same physical environments. By the time learners go to Grade 10, it is expected that they would have acquired enough skills to enable them to learn in inclusive settings and later on transition to tertiary education. But, as it has been observed, learners encounter many challenges in the form of poor attitudes from teachers, fellow learners and their home communities.

Families of learners were cited to have negative attitudes towards the education. In FGD01 and FGD02, learners reported that some families preferred to pay school fees for the sighted children than those with visual impairments. In FGD01, R5 mentioned the seriousness of the scenario in the following words:

> *[For] us the blind and physically disabled, sponsorship is difficult because in our family those who have money do not pay attention to the blind but they help those without disability. Some use words like 'this one is blind – what can he do? The blind cannot do anything in Zambia, all they do is eat'. This is a big problem in the community.*

Echoing the sentiments of FGD01, in FGD02, R3 stated that some children with visual impairments have stopped school due to segregation in the community and families. Here are the sentiments:

> *Sometimes parents discourage or even lose hope because you are visually-impaired that there is nothing you can do. Even in the compound people say there is nothing you can do. Our friend has stopped school because of the same so these are the problems.*

The negative attitude of the people who were expected to offer support to the learners affected their hope of getting an education. Some learners with visual impairments have dropped out of school because of the attitude of these significant people in their lives. Families, teachers, peers and the local community have an important role to play in enhancing education of persons with visual impairments. School and family collaboration is important in teaching ECC skills. This was

established when we discussed the power of school and home collaboration as was submitted by students with visual impairments. However, these two entities can only work together if they focus on abilities and not weaknesses of the learners. In FGD02, R1, a learner with albinism, showed how peers shunned her because of the nature of her skin and the challenges she had with sight.

> *Best friends maybe discouraged by people who might wonder why you are friends with albino. "Why are you found with albinos"? Our friends are discouraged.*

> *…Yes, as R3 said about the blind, yes, especially assisting with mobility, it is the same for us the albino. So, at times I just say I will be staying home.*

University students reported poor attitudes of teachers, family and the learners themselves towards learning ECC skills. One attitude portrayed by the teachers was lack of commitment. This was reported by IP4 who stated that this was partly as a result of lack of incentives to motivate teachers in special education.

> *Maybe some of the incentives from the government was not enough because we used to complain that for you to learn all these things teachers need to be motivated, because previously teachers used to get 30% the special teacher from government but this time it is not there so teachers complain that there is no way they we can spend much of our time to teach skills to learners with VI that's why are Talked about motivation it's not there.*

The opinion of IP4 was echoed by curriculum specialist (CDC01) who said that teacher attrition and poor attitude towards work were a result of withdrawal of a salary incentive for teachers handling learners with special needs.

In his submission, IP1 brought out the issue that families and society had negative attitudes towards them.

> *Other challenges socially not only in institutions but I can talk from the families that we came from we face a lot of challenges where we are coming from. For instance, people in the family think because they still leave in the past where they think if someone has a disability then it is curse in that direction so financially those people can't help you are anything concerning education*

because they think you can't achieve…. Yes, people still think you are not capable and that there is a divine force pushing you to achieve…… Some say you have help from people because people have sympathy on you and all that.

The unfavourable attitudes of parents found here were also reported by learners in focus group discussions. The finding here was that generally people did not expect persons with disabilities to excel in life, be it academically or in employment. These myths have considerable influence on what society could do to help people with disabilities achieve. IP1 also mentioned bad comments he received from sighted people in the university on the wrong use of the sighted-guide method. The male student and his male peer were moving hand in hand. This arrangement made on-lookers conclude that this was a gay couple in the university. The experience of IP1 was unfortunate but could have been avoided had the sighted-guide method been applied correctly. Lack of correct application of sighted guide method could be attributed to wrong teaching of the skill rather than an issue of attitudes by the user of the method.

Another area where poor attitudes were cited was in learning cane skills. IP2 and IP9 stated that they were uncomfortable using canes because they made them look like old people. This attitude was reported especially by IP9. For IP9 he had this to say about his negative attitude which influenced his learning of cane skills:

Almost every visually-impaired [person] never use to think about using a cane because it used to be very oldish. There was no teaching of mobility because we were refusing as pupils. We never loved it …Well teachers were willing to teach cane skills, but you may find that pupils we never wanted to do it we thought of those guys who were old in our country if you notice people who move with canes it differs from other countries are old blind guys.

Feelings of inferiority about ECC skill acquisition manifested later in life when learners experience a totally new environment where expectations to use skills they learnt early in life arise. These skills may not be up-to-date partly because learners were not willing to learn or practise in the primary years of their education.

The negative attitudes of learners towards learning ECC skills such as cane skills can be viewed as a result of society's attitudes where cane use is stigmatised. With counselling done by parents and teachers, learners can be helped to accept ECC skills as an integral part of who they are. Learners can accept being different and those around them can equally appreciate diversity. One teacher mentioned that learners tend to become bored with repeating the same skills many times. It must be mentioned here that it is the teacher's responsibility to help learners appreciate the need to teach, reteach and preteach ECC skills.

Vygotsky in his theory on dysontogenesis indicated that society's negative attitude and behaviour towards learners with disabilities (called secondary disability) deprives the learners, in this case those with visual impairments, from achieving independence. In as much as the impairment itself has effects on the development of potential, social setting and attitudes modify the course of development (Gindis, 2009: 3; Lumadi, 2013: 2). Negative attitudes make families, peers and teachers fail to tap into the positive aspects of these learners and develop them. Vygotsky further argued that the main focus in education should be to change negative attitudes of society towards the primary disability (impairment). With positive attitudes, society would apply positive differentiation.

5.3.3.2 Teaching personnel

Availability of teaching staff is an important factor in education. For learners with visual impairments, professionals work together to provide specialised skills. The teachers mentioned that lack of trained manpower to teach ECC was a problem. This finding is in line with their submission that most of them did not have training in ECC. Although teachers gave a list of some people who work with them, the staff were only invited to give talks in some cases. The orientation and mobility specialist was not available as part of the teaching personnel.

The curriculum specialist indicated that there was a shortage of teachers and specialists like orientation and mobility and transcribers. CDC01 stated the following:

> *In the first part the structure is small; we do not have enough manpower or human capacity. In the past, we used to have a braille press; like I mentioned, there were only five officers whose role was to print braille.*

According to CDC01, the curriculum development centre is understaffed in terms specialists in the area of visual impairments. At the time this study was carried out there was only one position at CDC. Other staff members who served the visual impairment department were also not available.

The findings (FGD02, FGD03) showed that schools did not have instructors in orientation and mobility; therefore, learning of these skills was affected. The learners also indicated that they did not have braille specialists to transcribe examination scripts. The following were their views:

> *The teacher who teaches mobility left the school and there are few teachers so we learnt from G1-7 and the teachers left.*

In FGD02, learners agreed that the system did not have qualified staff, particularly orientation and mobility specialists were not available in the schools. As a result the staff available in the school taught some skills or left out others. Equally in FGD03, R9 said that there was a shortage of teachers and the few that were available were given other responsibilities besides teaching.

> *There is also shortage of teachers. We are supposed to have teachers who know braille like Mr M and the other madam. The problem is the teacher available is busy. They call him for other activities.*

The finding that teachers who were knowledgeable about ECC skills were equally involved in other school activities like administration and teaching other skills and subjects in the core curriculum (FGD03, FGD02) was in line with the study conducted by Brown and Beamish (2012: 86) who stated that in as much as teachers wanted to focus on teaching, other responsibilities took up their time.

In terms of methods used to teach ECC, learners were not satisfied with the methods used. In FGD02, orientation and mobility was not taught using the right methods. The cane was only used during training and times when learners moved out of the school campus. Equally, learners were teaching one another some ECC skills such as independent living and life management. For the learners, this was the most popular method of learning ECC skills. Peer teaching is a good method as long as the teacher supervises what is being learnt. Unfortunately, in this study, peer teaching was not monitored and learners passed on the skills as they learnt from the

peer who learnt from yet other one. It can be asserted that peer teaching strategy was ineffectively used in teaching ECC.

Students such as IP5, IP3 IP4 submitted that they were not comfortable with the strategies used in teaching ECC. They said that the methods used were inadequate. The choice of methods was attributed to some of the challenges encountered and also inadequate training of teachers. IP5 had the following to say:

> *I will start with the training of teacher, there are certain skills, and since I have seen them. And tested them. There is too much theory than practical. There they should have more knowledge as much as they should do things on their own they also need help… Well, at primary school to a certain extent I was not satisfied with the methods used to teach especially on the part of mobility because most children are not able to use canes independently.*

IP1 an IP4 reported that orientation and mobility was not taught using the right methods. The cane was only used during training and times when learners moved out of the school campus. Unfortunately, there were hardly any organised trips to practise mobility skills outside the school campus. IP4 mentioned that some teachers with visual impairments neglected teaching orientation and mobility because they assumed that everybody somehow knew how to move in the environment. He put his views in this manner:

> *No, I did not learn cane skills. Most of the teachers who use to teach us were not oriented, not specialists in that field so man power was not enough to teach us those skills Yes, on the time table it's there but people to implement those skills [are not].*

In the teaching of social skills, some schools never had time when the school deliberately arranged social interactions with the sighted learners. The learners (IP1, IP6, and IP6) brought out the aspect of schools not having a deliberate plan to teach the skills. Students indicated that teachers did not put in much effort as such skills such as recreation and leisure and social skills were not deliberately taught. The learners mingled amongst themselves which entailed limited inclusion. IP6 gave the following views:

Yes, like for social. We mingled among us only not with the sighted ones, I can't remember the day we interacted or mingled with them, that one we just learnt on our own. No there wasn't such there was no deliberate teaching of social skills, it was unguided.

The findings on methods of teaching being a reflection of training was echoed by teacher trainers, learners in special schools and curriculum specialists who indicated that teachers did not used appropriate methods in ECC.

5.3.3.3 Enrolments in teacher training

Teacher trainers indicated that one challenge in training was the large number of trainee teachers. Teacher trainers reported that they were unable to train adequately because the numbers of trainee teachers were large and staffing levels were low. In the view of TT1:

The other challenge is that we have very big numbers about not less than 150 students in a class. The other year we were handling a class of 320 students. I know that teaching sometimes becomes a challenge when you have very big numbers because at the end of the day to get the message across to everyone correctly it's really an issue. The numbers also contribute to a lot of other challenges …Actually for the members of staff we are only two with addition of another course, so it's one per course. That's why at the end of the day lecture method becomes the normal way rather than using some pedagogical approaches.

Indeed, with a class as large as 320 students to two staff members coupled with a lack of teaching resources, the trainers felt justified using lecture methods to teach ECC skill without giving demonstrations or practical aspects of training.

Training in ECC skills requires time and teaching materials as well as staff to train. The scenario at the university was far from being the ideal way of training teachers to teach skills to the learners. If the teachers were not adequately trained in ECC, they equally cannot teach these skills effectively. They simply do not have the skills to impart to the learners. The teacher trainer was quite clear that they were not training teachers well enough to teach skills to the learners and submitted the following:

No, practical are not adequate because I presume most of the activities in ECC are practical in nature. While we lecture them by teaching our students, it would only make a lot of sense if there is a lot of practice.

On the contrary, the college had different experience in terms of numbers of trainees. The college showed concern about the small number of students wanting to train in blind education. TT3 clearly brought out this point by saying:

Because most of the time we are dealing with in-service teachers our enrolment numbers are very low, especially the full-time students, issues of study leave have to be on the training plan. It could be that there are a lot of institutions offering special education. Our numbers are affected. So in the full-time programme the number and class size are small, especially in our department because when the students apply and come they tend to have this perception that braille is very difficult, so they avoid picking this programme. That's another negative effect on numbers. You find that other departments have lots of students while we have small numbers.

At the college, numbers of trainees who enrolled to train in education for the visually-impaired was very low compared to other disability areas such as learning disabilities and hearing impairment. The explanation for this was given by TT3 who stated that most trainees was that most trainees were serving teachers and had challenges getting study leave to pursue full time studies. The other reason was that many trainees avoided registering for braille education because of the perception that braille education, a component of teacher training for learners with visual impairments, was very difficult.

5.3.3.4 Discrepancy between training and implementation

TT1 and TT3 talked about the discrepancy between training facilities and the actual implementation on the ground. The point is that the university or college may give the skills but teachers in the schools may not be teaching these skills to their learner due to a number of factors such as lack of materials, too many subjects to teach or lack of motivation. TT1 stated the following:

The other thing is I also think that even if sometimes we teach all these things, the implementation on the ground is weak, because you find that in schools

they will just focus on academic aspects of the pupil without really looking at these areas which need development. Already that is creating a problem because you work hard, you teach them but they have nowhere to implement except braille. Braille is there but other things may not be implemented. It's a challenge; there is no motivation for the students.

In agreement, TT3 stated that teachers may not find some equipment they were exposed to during training. Most schools focused on teaching core subjects and neglected the ECC, or the schools were lacking in materials required in teaching ECC. Therefore, teacher trainers felt that giving the skills to the teacher trainees was not very beneficial. When they went into the schools, for example they might not find white canes to use to train orientation and mobility.

This finding or view of teacher trainers was not sufficient justification not to train well. Even though teachers in the schools mentioned that they were focusing on the core subjects for various reasons, the teacher trainers still need to do their best.

An important component of teacher training is hands-on experience. This is one aspect which trainees should have. In his submission, TT1 mentioned the following:

And maybe lastly, we do not have a lot of areas where our students could go and practise these things even before they go to schools. I would have loved if we had a situation where we are talking about physical education for blind children, maybe we go out, let them see how it should be done in real situations. But you find that there would be no transport to do that.

Practical and hands-on experience are important in training field such as the education of learners with visual impairments. In as much as the trainees will be deployed for school teaching experience, the training institutions should be able to provide students with an opportunity to practise with the actual learners in the institutions near the colleges or the training institutions need to have internal facilities to provide this.

5.3.3.5 Teaching and learning resources

The finding of the study was that lack of teaching and learning resources was the most serious challenge. Although there were donations of materials and schools

made some of the aids, these were not sufficient to cater for the many types of specialised materials and equipment required in both ECC and core curriculum. This challenge was reported by teachers curriculum specialists, learners and teacher trainers. The study found that the supply of materials to the special schools was hampered by high prices of equipment compounded by insufficient funds and non-availability of materials in the country being among challenges (CDC01, CDC02).

The government through curriculum development centre is responsible for providing teaching and learning resources to schools. This responsibility is found in the national policy on education, Educating our Future (MoE, 1996: 69), which reads:

> *The Ministry will give attention to the educational needs of exceptional children by: designing appropriate curricula and teaching materials; prescribing specifications for special furniture, equipment, aids and infrastructure provision; developing appropriate support technology systems.*

The curriculum specialists (CDC01, CDC02) cited prolonged periods between procurement and distribution of resources to schools. The last time the government procured materials for these learners was 2003, some 13 years ago. in addition, some of the resources procured were not required in schools because the schools who were the end users were not consulted. CDC02 said this:

> *No, No, we last procured in 2003; that's when we procured bulk, consignment of those materials were still distributing. From 2003 to date we have not received and requested. But, those on high demand like braille paper, Perkins Brailler they are all gone. We wanted more buses for the schools, these things have up to now not yet been procured.*

Equally linked to funding issues was the long process of procurement of the materials required by the schools to effectively teach ECC skills. CDC02 stated the following:

> *A lot of equipment for the VI has not been procured because of the price. The prices are on the high side. I would say funding problems. We do not have enough funding. You are aware this is a developing country. Resources are not enough to go to all the schools. We really have to struggle to get these resources.*

The AFB (2005) cited in Nimmo (2008: 35) stated that in order to have equal access to the curriculum and to compete with their sighted peers, learners with visual impairments require books in appropriate media, materials, equipment and technology. These specialise materials can be quite costly. Assistive technology for these students is very costly for example a braille note taker can cost from USD6,000 to USD9,000. A compounding factor in the procurement process was cited by CDC01 to be non-availability of manufacturers or shops selling these materials for learners with visual impairments within the country. The resources most required in the schools such as braille writing equipment, braille frames, Perkins brailler and braille paper were no longer available for distribution and the learners did not have them. CDC01 reiterated that teaching and learning resources were in short supply because these were procured outside the country and took time to arrive in the country. Here is what he said:

> *Teaching and learning resources, we have a lot challenge there. Lots of challenges. Most of these items specially for VI, you cannot find them in the country; you have to get from outside countries like South Africa, Japan and other European countries. We usually order them maybe every two-three years, due to lack of funds.*

Although there were donations of materials and schools made some of the aids, these were not sufficient to cater for the many types of specialised materials and equipment required in both ECC and core curriculum delivery. Non-availability or inefficient disbursement of resources affected the entire provision of education for learners with visual impairments.

MoE (2013: 36) called for transcription of print materials into braille as an important ingredient for effective learning for the visually-impaired learners, just like sign language for the learners with hearing impairments. However, the finding of the study was that the Ministry did not have textbooks for core subjects in braille. CDC01 made the following submission:

> *Text books for the core subjects, it is a challenge at the moment. Before the year 2003 almost all subjects used to be brailled but later on I think we had no officers based here and when the MOE re-employed, the people did not know*

how to use the manual equipment to produce braille so these became obsolete...

One teacher indicated

"There are no materials .we teach out of passion"

Similarly in teacher training institutions, non-availability of resources affected training. This was reported by the teacher trainers. At university level, the lecturer indicated that resources such as computers and braille production equipment were in short supply. TT1 indicated the seriousness of the situation by saying this:

Apart from that, already the university doesn't have enough materials to help our students practise these things. I would give you an example, I know recently we bought braille frames and paper but we don't have Perkins brailler so that they can learn. These are some of the things students use in schools. We don't have enough computers with screen readers so that our students get acquainted with assistive technology. We do not have the material that [is] required for our students to understand orientation and mobility, for example, blindfolds.

Braille transcription facility at CDC was not operational due to lack of specialised manpower to handle the facility. This explained the non-availability of books in braille in the schools. This was a serious matter whose implications were that there were no textbooks for learners in the right medium.

For institutions of higher learning the difficulties were observed right from the point of procurement of resources required in training of teachers. TT1 indicated that there were challenges in procurement of the materials within the institution. The procurement procedures were long and cumbersome. Besides most of the materials for learners with visual impairments were not readily available in the country.

Similarly, TT2 further argued that:

The use of computers in the institution, we don't have that technology for our students. It appears they are so much behind as far as technology is concerned…We also receive students that have just become blind. Even in training, they seem to be in denial. Moving with those students in the

programme is a challenge ... This may go actually to the whole community and how they look at the VI. It may not be our institution but the whole community. The VI become isolated, they fail to socialise with others. As a result, they lag behind.

The lack of materials for training was echoed by TT3 that the institution had no materials for trainees who are visually-impaired. The materials that would be used in training teachers would be the same ones that trainees with visual impairments might need to use for their academic work. The teacher trainer stated the following:

The college does not equally offer good counselling to trainees with visual impairments. This may contribute to the person with visual impairments' failure to become included in the academic world and also community life.

Lack of support for trainees with visual impairments was also reported by Gebrehiwot (2016: 165) in a study conducted in Ethiopia at two universities. The lack of training materials equally made it difficult for trainees to practise skills in their own time to perfect them because they did not have the devices. The limited availability of training materials caused the trainers to simply lecture or discuss these skills without giving practical training. TT2 mentioned lack of materials in the correct medium, lack of assistive technology for these students as well as inadequate counselling to enable the students cope with college life. His submission was:

The materials used in training teachers would be the same ones trainees with visual impairments might need to use for their academic work. The lack of training materials equally made it difficult for trainees to practice skills in their own time to perfect them. The limitation in training materials also was one of the factors influencing the trainers' decisions to use methods such as lecture to teach ECC when they could have given demonstrations and conducted practicals in ECC.

Lack of teaching and learning resources was compounded by the fact that most resources for the visually-impaired were not readily available for anyone to purchase within the country. These materials were usually donated by partners or purchased from other countries.

Learners cited lack of resources to use in learning not only ECC skills but the core curriculum to be among the main challenges they encountered. Learners in FGD01, R7, R8, reported using Manila paper to write their work on due to shortages of braille paper. The other resources that were in short supply in the schools were white canes used in orientation and mobility training. R8 emphasized the seriousness of the problem in this manner:

> *I don't have a Perkins brailler, I want the government to buy more Perkins braillers so that I can have my own, even a ream of braille paper …. Actually [with] braille paper we have a big challenge. Sometimes we use Manila paper we cut and use [it]. About computers and typewriters, in the past we were trained on typewriters. We do not have enough computers. Only for the offices not the pupils so it is not possible for us to be trained in such technology.*

The participants in FGD02 all stated that they did not have individual white canes for use. In fact, the canes were available for training purposes and then the learners moved in the school environment without canes. The learners were expected to purchase canes when they transitioned to tertiary education level or joined the community. The shortage of canes compromised the teaching of cane skills such that learners were encouraged to move without canes so that they get used to the situation and when they move to the new environment experience fewer challenges. A white cane is an important tool in the development of a person with a visual impairment. It is much more than a stick for use. Cutter (2007: 1) stated that a cane serves several functions like controlling posture and gait, it helps with the development of self-confidence to travel independently, and a cane is a protector, detector, and previewer of the elements available in the environment. With cane use the learners is active and able to achieve sensory integration as the shaft of the cane gives information through the hand to the brain for the person to make decisions thereby achieving cognitive development. When cane skills are not taught, the child's cognitive development, freedom of movement, and confidence to travel independently are also at risk of not developing.

The study established that the schools were in short supply of textbooks for core curriculum in braille. This was confirmed by CDC01. In FGD02, R9 equally cited difficulties with materials in core subjects like mathematics and science. The learner

mentioned that the resource room was filled with old books, mainly story books, which were not very helpful.

> *Thank you madam, in our way of living the big challenge, at junior level there was no problem because they were handling us with two hand. Here we have no books for notes. Those books in the shelves are just story books. Unless we can have R.E., maths, biology, chemistry, physics and others.*

A check at all the schools revealed that resource rooms indeed had old story books and newspapers in braille on the shelves without any text books. The curriculum specialists affirmed that from about 2003, the braille transcription facility at CDC was not operational due to lack of specialised manpower to handle the facility. This explained the non-availability of books in braille in the schools.

In FGD01 and FGD02, the learners said the schools did not have high-tech assistive technologies such as computers and typewriters. R3 mentioned the following:

> *According to our school us we have got a subject ICT, that one it's a subject but the only thing which is causing problems is lack of notes. Apart from that there is only one computer which is working. There are other computers but not working due to viruses. This is the problem I do face in school.*

Computer studies was a new subject in the core curriculum (ZECF, 2013). There was need to equip all schools with computers more so the special schools for learners with visual impairments.

Students mentioned that materials such as computers, white canes, braille frame, Perkins brailler, balls and textbooks in braille were not adequately available in the schools for learners to use to learn ECC skills and core curriculum (IP10, IP5, and IP9). The students mentioned depending on friends as readers for notes and information because the library did not have material in a suitable medium. IP5 shared his experience as follows:

> *Then in classroom most of the teachers who taught language opted to have one of the best readers always sitting with me. It helped me read most of the materials because it was in print. It was not provided for in braille so I had to adapt. There were also issues at times we had to write tests under dictation.*

Then we were being compelled to pay attention because we were being told, "no am going to read twice, the third time that is all.

IP2 felt that she was not trained enough to take care of herself when she transitioned from basic school to high school. She felt that challenges in access to resources was affecting her academic performance. The challenge of lack of materials was compounded by poor preparation for transitioning. She submitted as follows:

So am sure it's a challenge. We depend on friends. They go [and] search [while] we wait for them. That's why even performance academically is not to our level. Sometimes they give you second-hand information. Even my performance has gone down.

5.3.3.6 Learner assessment

The study identified that assessment of learners prior to enrolment was a challenge. CDC01 reported challenges at point of enrolment. Assessment of learners with visual impairments to determine placement in school was not conducted systematically. This resulted in delays in placement of learners as well as the onset of intervention programmes. He stated the following:

Yes, for example talk about the learners with visual impairments when they come school, we don't do a very good assessment by a team of experts, parents, sociologists, psychologists. These people are supposed to be together each specialised in a particular area. They will try to prescribe what's required when all put together things tend to work well. Some schools refuse to enrol before an assessment report is given. The assessment can be done at school but this delays the child's beginning to learn. We lack professional teams to look into the child's welfare. Problems are sometimes noticed at Grade 7, it is too late some children may not do well academically but skills training they may do well.

Further CDC02 mentioned that where there was no clear path in assessment, sometimes a child was delayed the whole term. In the absence of assessment teachers would teach what is common to all learners without regard for individualised attention. Each child is supposed to have his own plan sufficient to complement the core so that a child with visual impairment can learn and fit in society. This finding

contradicts the statement in the Educating our Future document (MoE, 1996: 68) that "Working closely with the Ministry of Health, the Ministry of Education will decentralise services for the identification, assessment and placement of children with special educational needs".

The specialist lamented that there was lack of teamwork by professionals to assess children for visual impairments. Indeed, a collaborative approach is recommended in assessment of learners with visual impairments. The fact that there were no assessment teams in place, put all the work, and efforts to educate these learners in a difficult position. Collaboration efforts demonstrated in teacher training and resource mobilisation could be extended to assessment as well. The Ministry could have collaborated with other partners in this area to ensure correct decisions were made on intervention. Lack of assessment had implications for the types of intervention provided and the academic and social life of the learner. Vygotsky theorised that in order to nourish the different development path of the learners with visual impairments, their development paths needed to be identified and assessed (Gindis, 1999: 4). Therefore, the second principle of Vygotsky, which is remediation through education, can only be effective when thorough analysis of the disability and psychological structures of the learners were conducted. Assessment and evaluation are important stages which should precede intervention.

It was found that lack of statistical data on learners with visual impairments in the country was affecting delivery of ECC. According to CDC01, there was need to conduct more research on education of the visually-impaired. In his submission, it was clear that not having the numbers of learners influenced planning and resource allocation:

> *We don't appear to have enough resources. For example, if you came to us how many children are there in the country who are usually impaired it would be very difficult for me to give that answer, I would guess we don't have a lot of research in special education, visual impairment so that data can be updated every year. I think we are still a little bit far.*

In the cases of learners, findings of the study were that learners faced two specific difficulties in the area of assessment: lack of feedback and assessment tasks in the incorrect medium. In FGD02 and FGD01, lack was feedback was attributed to loss of

scripts written in braille at the marking centres mainly as a result of lack of transcribers or poor transcription by those entrusted with the braille scripts. In FGD01, R1 made the following submission:

> *…in transcription of examinations papers the papers got lost. They are not even transcribed so we lose examination results. I can say much of G12 exams because at G12 level, as I am speaking, I have lost [my] biology paper I have not seen it because transcription is not good. The reason is the teachers are few who have done braille... He told me that the papers were not transcribed, so when marking the ones in ink are marked earlier because they mark to make money. So our papers are not priority because there is little money; sometimes the transcriber's handwriting is not so good so the scripts are not attended to. So they end up forcing pupils to write in ink then the handwriting becomes bad. It's equally a risk of being poorly marked.*

The learners equally speculated that other reasons to explain loss of examination results were that teachers knowledgeable in braille had poor attitudes and concentrated on marking papers in ink print. Marking of examination papers is paid for by the government. Learners believed that teachers concentrated on handwritten scripts because these were easy and fast to mark hence they earned more money for marking more scripts. This would probably be true because braille users (as reported by FGD03 R3) who were advised by teachers at one of the schools to write their examinations by hand received results unlike those who used braille. The experience of R3 was as follows:

> *What happened is that Grade 9 examination papers were not paid attention to because many people in Zambia do not know braille. The papers were not marked. So, they thought of using large print for those with low vision and not braille.*

Forcing learners to write their examinations by hand to alleviate this challenge is unjust. It is against the right of a learners to have learning materials in the medium which is familiar and comfortable. (UNCRPD, 2006: 14). Failure by the system to provide feedback lead to other complications such as the ones experienced by R1 and R8 in FGD01, where learners were compelled to repeat grades and redo the examinations. This discourages learners (FGD02 R3) and creates feelings of

uncertainty about their future. The Ministry of Education through the ZECF (2013: 57) emphasised the need to give feedback to learners as this is believed to help learners improve and also as a way of getting learners to become familiar with undergoing an assessment.

The second challenge in assessment was reported to by braille users. Sometimes test papers were not in braille and for those in braille there were variations especially in contracted braille. There were a lot of errors in the use of braille in Grade 2, where contractions were not correctly done (FGD03, R3, R10). R10 had the following to say:

> *For example, instead of writing 'the' they write 'ed' then it's confusing. The contractions are not correct. Again, the questions in ink and those in Braille were different.*

On the matter of test papers not prepared in the correct medium, FGD01 R1 had the following to say:

> *When its tests they don't burn (emboss), make many copies in braille but pair us with the low vision to read for me. It is unfair because the other person is also rushing against time.*

The challenges in lack of feedback were equally reported by university students who complained of lack of feedback on assessment tasks. One student stated the following:

> *Also the issue of you write a test and then it goes missing we have experienced that whereby we wrote our test and then it went missing ……Yes we have not received test papers in Education course but the marks were given. So we don't know how we were giving these marks without giving us the papers, those are the challenges* (IP10).

IP10, IP2 and IP9 indicated that the continuous assessment task such as test papers were not given back after marking. The learners wondered how they obtained the marks without seeing the test papers. The learners were very concerned that the experiences they had at secondary school where the assessment task would be overlooked or lost also obtained at the university.

IP2 also mentioned that lack of a transcription facility as a compounding factor made it difficult for learners to follow up on test scripts which went missing. The transcription facility would go a long way in alleviating challenges with braille. However, it would be desirable for students at this level of education to be seriously focusing on getting more acquainted with using high-tech assistive technology such as computers to do their assignments. However, this could be achieved through collaboration among stakeholders in education of learners with visual impairments.

5.3.3.7 Curriculum accessibility

The MoE (2013: 21) stipulated that learners with special need will require adapted curriculum and adapted technology to meet their needs. This study established that curriculum had several limitations. The curriculum specialists categorically stated that the curriculum currently had gaps and that meant many complications for learners with special needs and those with visual impairments in particular. CDC01 admitted that the curriculum for learners with visual impairments was not adequate:

> *The curriculum which is appropriate for other learners, the so-called normal curriculum is not appropriate; as such one has a lot of children still not in schools. Parents are still hiding their children with disabilities. They are not accessing schools. Because one of the reasons is that even if they are sent to school, they may not benefit.*

Several gaps were identified. The first was a lack of uniformity in what was being taught. The challenges related to time and staffing levels had influence as well. CDC02 mentioned that he observed that the curriculum at a private school for learners with visual impairments was not in line with the core curriculum provided by the Ministry. From the submission by CDC02, the Ministry needs to put its house in order. It has a mandate to ensure the right skills are given to learners. He made the appeal in this manner:

> *Yes, within the system, some will come and say we have syllabuses in guidance, and when you ask for a copy in braille they don't have one. Commitment by our people, we talk but implementation is a problem. I don't know where we go wrong, implementation resources are a problem. I went to a community school called M where they there are about 20 learners with*

visual impairments. They are using M curriculum and want their children to write Grade 7 examinations. It is because we do not visit these schools that is why they are able to do these things, imagine from 2011.

CDC02 further stated that the curriculum for teacher training was not sufficient. He mainly saws gap in the methodological issues of training where teachers were not grounded in pedagogical dynamics as the graduate teachers conducted themselves like lecturers in primary schools. He put his observation in this way:

What we are teaching in colleges is like they are going to lecture, if you look at the way the syllabus is, there are no things like how to help a VI child acquire braille skills. These are not there. It's like we are training lecturers to go and tell students to look for other things… When we come to revise the curriculum, we will deal with these things. Colleges do not know the curriculum framework, what we need are adaptations and methodologies and develop IEPs for these children, even task analysis. These are skills are missing in most teachers.

This finding is in line with the submission of the teacher trainers who admitted that training in ECC was not adequately done because the training period was not sufficient, there were insufficient teaching staff and the institutions lacked appropriate resources for training.

Further CDC02 mentioned that curriculum department was experiencing poor coordination in design implementation and monitoring. In fact, he acknowledged that there were lapses in monitoring the kind of materials used to teach learners with visual impairments in the private schools. He stated the following;

The skills are supposed to be in the curriculum to suit the child but that is not there? It is difficult to coordinate because this is prepared by a different department. Special education is not consulted on what to add for ECC. When they are teaching e.g. PE to learners with visual impairments they should have methodologies…Yes it has a lot of things, prayers, but when I looked at it, I said these are Zambian children going to Zambian secondary schools, but this curriculum, no let us have curricula which are acceptable. So those

children are learning in one class with their books. We need to be focused and thinking with very sharp eyes and minds.

The study found that learners had challenges in learning both ECC and core curriculum. In one discussion, learners indicated that the introduction of the new curriculum disrupted learning of ECC. In FGD03, R4 submitted that the introduction of the new curriculum brought about disruptions in the teaching of ECC. R4 complained in these words:

From the time, they brought the new curriculum we have stopped learning ECC skills.

This was also confirmed by teachers who stated that the new curriculum had too many subjects without considering the teaching of ECC. The new curriculum of 2013 has stipulated subjects and timetables which do not include skills in the ECC.

Another challenge in curriculum access was learners not taking all subjects in the core curriculum. The subjects in question were mathematics and science. In FGD01, R8 mentioned that they were not learning mathematics because the curriculum was not adapted to suit them. They mentioned that the policy to give added time to their assessment time was not beneficial because they were not coping with the core subject. R8 explained the issue as follows:

I was not doing math from grade 10 to 12 due to lack of materials in math. I decided to stop. I can't do math because I can't use scientific calculator. It gave me a difficult time to learn the calculator. I am repeating grade 12.

In FGD01, learners wondered whether there were other career paths besides the teaching profession. The limitation in career choice was attributed to the limited core curriculum coverage and not accessing the skills in the expanded core. This submission can be understood along with the one where they have limited access to the core curriculum. R1 put her concern in form of a question as follows:

My question is are there no other jobs we can do besides teaching?.... Madam, I think we will just be teachers because you just read notes when teaching. What other jobs do not require looking at the paper?

Without clear skills and institutional preparedness, learners could be disadvantage and experience limitation in career choice. A limitation in natural science education such as mathematics, chemistry, physics and biology usually implied that the individual would follow a social science career path, like the case of FGD01, R8.

The students at university (IP1, IP5 and IP7) stated that there were a number of irregularities in the way ECC skills were taught. The gaps were mainly that teachers and house parents did not know the specific skills to teach learners. Here is the submission of IP5:

> *Then they were other skills that the school mainly house parents felt those who could not see completely could not do for example some felt that those who could not see completely could not do for example, slashing, cut flowers but then when others did they took it that they were an exception and those who were unable to do it would not do it so there was more of an effort of not striking a balance on what a child could do.*

The lack of clear content and path of ECC delivery was also reported by the curriculum specialist and teachers. IP1 and IP7 mentioned that teachers were not sure whether they needed to teach braille or large print use to the learners with low vision.

IP9 reported challenges of curriculum in the secondary school section where the learners learnt alongside the sighted peers. His submission was that inclusive classroom strategies disadvantaged the learners with visual impairments and stated that poor academic performance by learners at high school level was attributed to the inclusive setting. He explained in this way:

> *Because of the so called inclusive education which is not very helpful, they have failed to say let's help these people. Because what they want is to just see the blind sitting in class, learning together without even looking at his social life without even looking at his practical skills, without even looking at his future life...... because I can even say before I clock on this part the performance of blind person from G1-G9 those who have been in exclusive education becomes best. The moment they go to inclusive education the performance becomes I mean bad; if you want you can do a lot of research.*

IP9 blamed the problems of poor teaching on the inclusive setup at the senior secondary level and that academic performance at junior secondary was better because, at that level, learners were taught in special classes. However, IP5 and IP10 believed that curriculum adaptation would work with adapted technology and proper guidance of the paraeducators. A clear curriculum for teaching ECC was essential so that a balance in the teaching of ECC and the core curriculum could be created.

5.3.3.8 Time constraints

Lack of time was found to be a serious challenge. This finding agrees with the one by Lohmeier (2005: 129) as well as Brown and Beamish (2012: 87), where teachers indicated that time was a difficulty factor especially blending teaching and other responsibilities, and that specialised schools go beyond school day hours to maximise instruction. The schools also tried to beat the challenge by giving ECC skills during normal school routine activities like weekend cleaning of dormitories and general cleaning of personal spaces.

The major challenges experienced in teacher training for learners with visual impairments included a lack of time to cover the work in the training schedule. This was stated by TT1 and TT2. At teacher training level, time was limited to cover all ECC skills. TT1 felt that students were doing a lot of courses and the course on visual impairments was just one of the many students were supposed to cover. For students at the university the bachelor's degree in special education did not provide specialisation in disability groups but students covered courses in all disability categories. The teacher trainer (TT1) admitted that the university was unjust in training teachers for learners with visual impairments because teachers were inadequately trained in ECC skills. The teacher trainers explained as follows:

> *Adequate time to impart the ECC knowledge. Our students are doing so many courses and this course ECC is just one of the many courses that they are doing. What it means is that for instance here is a student who has five course and has ECC, it means that time to do a lot of other things is limited by the fact that the student must also attend to other courses…Because in my view it's the issue of time to do practical for each of these is a challenge. In a way*

we give students practice by demonstrating to the friends in a particular situation, for example, shirt wearing and buttoning.

Equally lack of time was found to be one of the factors influencing choice of methodologies used in training. At the college, the lecturers felt that the reduction in the duration of training from three years to two years meant not having sufficient time to handle all areas in the ECC. TT2 stated the following:

As it is our programme is a crash programme because within two years our teachers do peer teaching, macro teaching and teaching practice. Certain things are not covered fully… Looking at the number of skills we want to share, I am of the opinion that the time we have is not enough.

The findings on the challenge of time were that students felt that time to learn ECC skills was not adequate, mainly due to lack of timetables or schedules for teaching. In some cases, the skills were timetabled but there was no time to teach fully. A number of ECC skills were cited not to have been allocated time for teaching. Here is the submission of IP3:

Like for mobility, I don't know maybe they have not programmed that they can teach the learners I don't know, because that one you just find you are being guided by your friends not that they find time to teach you mobility, for that one no… They were not teaching braille and orientation and mobility was also not there on the time table. It was only home economics and preventive maintenance.

In agreeing with IP2 and IP3, IP9 illustrated that ECC skills needed a lot of time for the learners to get the concepts. He put his illustration in the following manner:

So you may find that the teacher will come and say this is what you are supposed to do. But when he tells you to start writing he will be picking the paper going one by one looking at what you have written, touching what you have written and making corrections. So you may find that 40 minutes might be finishing without writing things that you might expect especially when you start in Grade 1.

The submissions from students showed that there were inconsistencies in teaching of ECC. This was attributed partly to lack of time table. Generally, time to learn ECC was not clearly stipulated. An examination of the curriculum framework (MoE, 2013: 32-45) confirmed that ECC skills were not among the subjects which had time allocated for teaching. Non-availability of a schedule to learn ECC resulted in learners teaching themselves through initiatives like peer teaching. This study also established that due to lack of time to teach ECC, some skills were not taught. Teachers concentrated on skills which were seen to be important, such as compensatory and functional academics, orientation and mobility, and independent living skills, which were a primary requirement for any learning to take place. This was reported by IP2 and IP3. It was assumed that since some subjects in the core contained ECC like home economics and physical education, there was no need to teach these directly or even have a timetable. This assumption does not hold because the teachers and learners clearly showed that ECC skills were important for the learners to access the core subjects.

5.3.4 Strategies to Improve Delivery of ECC

The participants made a number of suggestions on the measures that could be employed to improve the delivery of ECC in the country. These are presented and discussed here.

5.3.4.1 Engage the school administration

Teacher mentioned the role of school authorities as being critical in the overall success of implementation of ECC. As an important partner the school administration was expected to take up the various role presented in Table 5.11 below.

Table 5.11: Role of school administration in ECC delivery

Prepares teaching programme.
Buy and make teaching and learning resources.
Monitoring ECC activities.
Allocate time and space for activities.

Lobbying for donations for ECC teaching.
Encourage teaching ECC.

Table 5.11 above indicates that teachers felt that the school administration could actually help enhance the teaching of ECC skills through sourcing of teaching and learning materials and allocating space and time to teach the skills. The role of the administration as stated by the teachers was meant to deal with the two most serious challenges, which is lack of time and inadequate teaching and learning resources.

Lewis and McKenzie (2009: 490) found that the role of administrators in the success of ECC instruction was critical. In order to be most effective, teachers of learners with visual impairments need to have administrative backing through resource allocation for the programme as well as ensuring that teachers have a normal workload. Excess workload and added responsibilities were serious impediments in the delivery of ECC.

Teachers submitted that teaching ECC was important and there was need to put measures to improve delivery. The strategies are presented in Table 5.12 in order of importance.

Table 5.12: Ways to overcome challenges

Government to buy and provide teaching and learning resources especially those not made by teachers.
There is need to develop a time table specifically for learners with visual impairments where the ECC skills can be taught effectively.
Provide trained human resource.
Review content of some subjects or curriculum to remove or reduce some to accommodate ECC.
Improvising teaching and learning resource.

Table 5.12 above indicates that the most important solution to challenges in ECC delivery was the provision of teaching and learning resources while the second strategy would be to develop a timetable specifically for ECC. The third suggestion by the teachers was to provide trained human resources. Curriculum alignment to

accommodate ECC was also a significant strategy put forward. It was surprising that teachers did not see the need to receive in-service training in ECC as one strategy to improve delivery. Earlier, the majority of teachers said that they did not have training in ECC. In-service training could have been one of the major recommendations by them.

5.3.4.2 Employ more staff

TT1 suggested that the institution should employ more staff to supplement the staffing levels. In his submission, the lecturer identified large classes with a small number of teaching staff as a hindrance to effective training in ECC. The proposal was to have more staff employed to enhance the practical aspects of teacher training for learners with visual impairment. He put his suggestion in this manner:

> *Firstly, for instance the big classes, they could just say we may need more members of staff. That requires administrative will. More members of staff dealing with this course. If we can have, for argument's sake, if we are 5 members it would be easier to spread ourselves across quite a lot of other areas: attending to braille, practice of orientation and mobility. A tutorial group which is doing some braille and at other times they go for orientation and mobility, they are attending to all those areas.*

5.3.4.3 Increase time for training in ECC

The finding of the study was that both at college and university level, lecturers felt that time allocated to the teaching of skill in blind education was not adequate and that there was a need to increase it. At the college, the lecturer submitted that the reduction of the number of years in training from three to two years had a negative impact therefore the duration of training for the diploma programme should be reverted back to three years. TT2 made the following submission on this way:

> *In a period of three years we should be able to cover all the skills in ECC. As it is our programme is a crash programme because within two years our teacher do peer teaching, macro teaching and teaching practice. Certain things are not covered fully. If pushed to three years we can manage…. In three years, we would exhaust all these other skills in order to benefit the children out there.*

The submission by the teacher trainers aligns with the proposal by Sapp and Hatlen (2010: 344) who said that personnel preparation programmes must provide adequate instruction, so their graduates are able to meet learners' ECC needs.

Curriculum specialists suggested that teachers in special education need to specialise in one disability area for them to be more effective. Further the curriculum specialists advocated for inclusive schooling and the role of the special teachers as resource persons. This was against the backdrop of the current training at university where the teachers for learners with special needs were trained using a holistic approach. CDC02 had the following to say:

> *Teachers at the college should specialise and sit in resource centres in special schools. Around the special education schools, these should be inclusive schools whose teachers can get support and resources from the resource centres in the special education schools. If a teacher specialises they should be at a location where they offer services to other schools, for example at a zonal centre. If we had resources as a country; all schools should have had somebody specialised in one field or another.*

However, CDC01 had a different view, that even with an holistic approach to training, teachers could still graduate with skills to teach ECC. All they needed was to specialise in core subjects such as science and mathematics where learners with visual impairments were denied access due to lack of teachers.

Another aspect of teacher training was the need for continuous in-service training of teachers in ECC skills and training on how to make teaching and learning aids. The curriculum specialist said:

> *We need to continue certifying and capacity building of these teachers. You would be surprised to hear that most schools for the visually-impaired, mathematics, science and other practical subjects are not taught. It's the issue of specialisation, we don't have a teacher specialised in physics and braille, woodwork and sign-language. The teacher should learn braille from the resource room. Our teachers are not innovative they need to come out of college with these skills, making teaching aids. Even in the holistic approach, if these skills are given teachers would function well* (CDC02).

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According to Ajuwon and Craig (2007: 12), continuous capacity-building provides personnel with the requisite skills to meet the needs of children with visual impairments in their classrooms. It is also one way of improving skills in personnel as well as increasing numbers of teachers of the visually-impaired learners. In-service training could be intensive and take the form of face-to-face instruction, coupled with Web-based learning.

The curriculum specialist also suggested that a resource centre be set up where teachers would meet to learn certain skills, especially classroom strategies and methodologies. He said the following:

> *But when teachers are specialised they don't stay, where they go we don't know. Maybe the mainstream, but if we have a resource centre, all teachers would go there to learn how to teach. Instead of sending pupils to special education schools. All teachers specialising cannot work.*

Some areas short programmes could focus on include braille literacy and its application in providing assistive services. Other areas of focus could be assistive technology for learners with multiple disabilities; prescribing assistive technology devices; strategies for teaching specific aspects of assistive technology to learners who are visually-impaired (Zhou, et al., 2011: 208).

The students suggested that teacher training needed to be strengthened. There was a feeling that there was more theory than practice in the training of teachers for ECC. The call for good preparation of teacher was put forward by teacher trainers and curriculum specialists as well. IP10 felt that there was no commitment towards learners with visual impairments and felt this was attributable to the kind of training, hence the need to tackle the problem in training. He stated:

> *Teachers should be committed to teach us who have visual impairment. First of all, it should start [at] the grass roots like at this university. You are training teachers. There must be space for them to learn how to handle children with disabilities in sports. When it comes to productive unit, how to manage the garden and plant things, teachers should be taught.*

On the other hand, IP7 stated that the challenges in teacher training at university could be attributed to students taking courses they have no passion for. He

suggested that besides the normal application and selection criteria, those intending to teach learners with special needs be subjected to further scrutiny so that only those who will serve the learners join the programme. He submitted the following:

> *Some special education students are not helpful; … they are in the wrong program. They say he wants to graduate. So, applying would be helpful when coming into the program.*

5.3.4.4 Aligning ECC in the core curriculum

The study established that one way of solving the difficulties faced in the delivery of ECC was to create an aligned curriculum. This meant combining the teaching of ECC and the core subjects. The strategy of aligning the core and ECC was largely presented by the teachers to mentioned the challenge of lack of time to teach ECC.

Some of the strategies to align the two curricula were to integrate ECC and core skills in subjects. This would help reduce duplicating skills. This means teaching both skills in one subject. Teachers believed that would solve the issue of lack of time to teach both ECC and the core. In order to attain alignment, the CDC should prepare ECC in consultation with core curriculum. Lohmeier (2009:2) indicated that with collaboration, teachers and other professionals have an opportunity to align ECC with the general curriculum and also create an atmosphere where teaching ECC skills and achieving goals in the individualised education programme become feasible.

The finding on the call for alignment of ECC and core curriculum was found to be effective. A study conducted by Lohmeier (2005: 128) showed that 71.88% of the schools, indicated giving instructions in these areas as integrated into the regular curriculum and was taught during a normal school day. The integrated approach to teaching ECC requires planning and collaboration of personnel as well as matching the subjects of the core curriculum to skills to be taught in ECC.

An aligned curriculum has benefits. Lohmeier (2009:2) states that an alignment of the two curricula helps in bridging concepts, thereby helping us appreciate that ECC is not an isolated matter but one that is part and parcel of the learners' school content

The teacher trainers agreed that there was need to make changes to the way the courses were currently offered in the programme and to embrace the latest technology. Currently, the training institutions paid more attention to braille literacy than other skill areas. There was nothing wrong with this approach but times have changed and teachers were expected to have skills in assistive technology for the learners as well. The teacher trainers specifically mentioned the use of computers because with such skills, learners can fit into any academic environment without worrying about braille transcribers and training resources that are in braille. TT1 stated:

> *We need resources in terms of finances so that we are able to purchase computers that can be used for assistive technology and even computer can do a lot of other things because our students can also access internet and the like. So here we need to bring in computers and all other gadgets in this case am thinking about computer, embosser, printer, pearl which can translate hard copy into soft copy. Then let's train our student teachers on how to use these things with screen readers so that when they go to the special schools and find these things let them develop a timetable where our children with visual impairments can be train to use a computer.*

Zhou, et al. (2011: 208) proposed that the knowledge gap in an area such as assistive technology among practising teachers of learners with visual impairments, can be narrowed by training these at in-service level, thereby providing teachers with adequate hands-on experiences with assistive technology devices. Besides, teachers need to help learners access information from the internet. Learners may seem to cope with academic work as they reach secondary school but, at college level, the demand for academic success is greater and this calls for improved or a foundation in assistive technology use. It is evident that in other areas of training lecturers were not experiencing challenges but it was mainly in ECC skills. For the Zambian context, the inclusion of computer use in teacher training is a requirement because the curriculum framework has subjects in computer studies for all learners from the primary years of education. TT2 also echoed TT1 on the need to re-align courses and emphasised the need for government input as follows:

Maybe on that point of course as lecturer in the college we may have the skills on use of latest technology but if the government can buy enough computers so that we install them in the college and we teach those skills to the trainee teacher especially the visual impairments.

The teacher training institutions need to be clear about their mandate in teacher training. The curriculum framework guide on components or courses should include in teacher training for learners with visual impairments. For the university, specialist training in the education of learners with visual impairments should be done over a period of four years.

Table 5.13 below shows the suggestions made by the teachers on alignments of ECC and core curriculum.

Table 5.13: Suggestion for alignment

Avoiding repeating skills when they fall or found in two or more subjects.
Skills from core subjects and ECC area to be taught under one theme/subject.
Some skills can be taught in one subject.
ECC should be well timetabled by curriculum development centre.
The curriculum for ECC should be made in consultation with the core curriculum.
Integrate in some subjects.

5.3.4.5 Teaching and learning resources

For the curriculum specialists, having resources and materials delivered and produced at the right time and in the right place would be a dream come true for the education of learners with visual impairments. They called for a systematic development of syllabuses and production of teaching and learning materials for the same. Here is what they said:

If each province had a machine they would be doing it from there, for example, making books. Whatever books are written, we can emboss (CDC01).

If it is very expensive to produce braille materials then start with syllabuses and then grade materials. We need to support our colleague CDC01, who has

taken the initiative to produce materials. People should say let's print these materials. The children will be moving at the same pace, but if there are no materials, the learning and the examinations at the end of it all is not fair (CDC02).

The main area requiring attention in terms of materials was in the production of braille books and procurement of teaching and learning materials by the curriculum development centre. According to the specialists, the supply of teaching and learning resources was viewed to be one way of ensuring equity in an education system which is examination-oriented.

The desire of the curriculum specialist to have braille material production centres in all the ten provincial centres of the country would alleviate the shortage of teaching and learning resources. In FGD01, the learners stated the following to show that there was need for teaching and learning resources in the schools:

Government should provide … transport for taking us home (R7).

As my brothers have said, material, madam, as you know, ok families can contribute for small things but the others like Perkins and braille paper government can help. We can be very proud if government assisted us we these things (R8).

Availability of learning resources would go a long way in enhancing learning. Materials such as braille paper, writing frames and other assistive mechanisms like canes are critical to fostering the development of independence and adjusted lives for persons with visual impairment. The current level of need in teaching and learning resources requires serious attention from all stakeholders.

5.3.4.6 Learner assessment

In the area of learner assessment, curriculum specialists stated that there was need to give the learners enough time to learn ECC. In the submission made by CDC02, learners could go beyond the 12 years of education for them to learn both ECC and the core curriculum. He said:

Personally, for children like the VI, when are we giving them enough time to do the course for them to write exam? If not, we find alternatives. We bring

policy issues and will take a bit of time but if MoE, through TESS on ECC we need to add, I don't think a child with VI can fail braille, if given as a subject which is added to his final examinations. … So, we should give them ample time. The pupils should be connected so that they understand why they have to have time extended, we realise that we give extra time in exams and not in courses. So, we need to give more time. They write same exams except the exam numbers might expire. But this can be extended by one year.

The suggestion by CDC02 to have learners with visual impairments spend more years in school than their sighted peers requires further exploration. The two areas where allocation of more time was seen to be a solution were during examinations and the academic time for learners from grades 1 to grade 12. The suggestion made by the curriculum specialist to cover more years above the 12 years for all learners meant that learners with visual impairments would take another 2 years to learn ECC and core curriculum skills in the best way. This suggestion was in line with the one by Lohmeier, et al. (2009b: 104) who said that one way of increasing time to cover ECC was to have learners in school for more than 12 years.

However, adding more time to academic duration may not be the best if ECC skills were clear in the curriculum, teachers trained and resources for teaching were provided.

Students were of the view that methods used to teach be improved. IP6, IP3, IP4 and IP10 suggested that ECC skills be taught using demonstration methods where the learners also have hands-on experience on the tasks. Instructions for the visually-impaired must be given directly. This method of teaching was widely recommended by the students. IP6 and IP4 indicated that skills such as functional academic, recreation and leisure, independent living and orientation and mobility skills would be best taught through demonstrations and practicals. IP6 made following suggestion:

Demonstration is the best. To us, we need to touch as they are demonstrating. Ok, for leisure, we need a teacher to demonstrate what is supposed to happen. Even dancing is the same. We need to demonstrate how we match with the song then we pick it from there. Even activities for daily living like baking, we can't just do the actual thing. She does it then we

do it alone. Next time she won't need to explain to us but just give us the material then we go ahead.

Another method of teaching suggested by students (IP2, IP4 and IP5) was discovery method and excursions where the learners learn through exploring the environment along with their teachers as facilitators. Arranging field trips or visits to public places like movie halls and shopping centres would be ideal for teaching mobility, social skills as well life-management skills.

The learners also submitted that the methods used in teaching ECC needed to be improved. The methods identified to be most appropriate were discovery, exploration and demonstration. On the challenges experienced in learner assessment the study found that learners needed to be given feedback on examinations. In FGD01, R3 stated the following:

I can say those in higher offices should speak for us on missing examination results.

The learners also suggested that marking of examinations be decentralised to provincial centres. Learners believed that examination scripts were taken to Lusaka for marking. In FGD01, R10 said:

Madam, let them mark our papers at province level, not take them to Lusaka.

Equally important was the suggestion that the Ministry employs braille transcribers to handle braille work for the learners. The choice of teaching methods was partly influenced by other factors such as staffing and availability of teaching and learning materials.

5.3.4.7 Advocacy and collaboration

Empowerment of persons with visual impairments calls for team work. Teacher trainers recognise this requirement. There are many stakeholders who need to contribute to making empowerment of the learners achievable. For TT1, team work brought about success in the provision of education for learners with visual impairments. He further submitted that people who have knowledge on the special needs of learners with visual impairments should take a leading role in advocating for service provision. He made the following proposal:

We cannot change the blind people in this country unless we introduce them to ICT. I am saying that even those that need to come to institutions like university if they can come with computer knowledge then they will make life very easy for everyone. Because if he knows how to read and write on the computer he can get soft copy notes from the lecturer, no struggling for someone to do braille. Some lecturers have books on soft copy, they can give a blind person and he can read on his own. It will make life a lot easier for blind people. We are so behind in Zambia because someone in our school and probably our teacher training, we have not done so well in terms of providing ECC.

Indeed, rather than blame one part of the system, the teacher trainers called for collaboration at all levels. Lewis and McKenzie (2009: 490) indicated that teachers of the visually-impaired must take a leading role in explaining the importance of the skills and concepts of the ECC to administrators, parents, and other educators who may not understand the need for time and resources to be spent on the ECC.

Teacher trainers mentioned that the government was the major source of resources for teacher training especially in public institutions. Therefore, the government needed to do more to support teacher training for learners with visual impairments. TT1 had this view:

Most of these challenges can easily be resolved. One, by involving the government. As you may be aware the equipment for VI is expensive. As an institution, we don't receive enough funding to buy these. We need Perkins brailler and braille paper. Secondly, organisations can be brought on board to help us with audio books, braille books. We can also record these books for our students to read.

The university and the college are public institutions. To this effect, the major financier of activities was the government through the Ministry of Education. TT2 stated that government involvement was deemed critical before other organisations could come in to collaborate as suggested by the principle of partnership, one of the principles guiding education provision in the country (MOE, 1996: 5). TT1 suggested that if as institutions of training collaborated with other stakeholders, challenges such as lack of exposure to practical situations would be reduced. Teacher trainers also

proposed the active engagement of other stakeholders to help the special schools acquire the equipment and materials such as computers. In this way, there would be no gap between what they train the teachers to do and the actual teaching in the schools. To this effect, schools were called to pay attention to teaching ECC skills by allocating time for ECC skills in the school timetable to ensure delivery of skills. TT1 explained in the following way:

> *I know it requires a lot of concerted effort. Schools have ended up concentrating on academic provision. That academic provision depends on braille. We need to widen the scope for our learners. I know it's a long-term idea, but for our learners to become meaningful and beneficial to the community they need these other areas, the ECC which need to form part of the timetable in the school… we need other stakeholders to come on board, like those that can support our students to go out, maybe for excursions where they are able to see in reality on how to implement some of the ECC activities... We were discussing with someone that we need to influence Zambia Information Communication Technology Authority (ZICTA) to begin focusing on blind schools in a different way by helping acquire a number of computers for their development.*

The submissions of the teacher trainers were progressive and suggested that what was needed was to collaborate with the identified partners. A collaborative approach is necessary for the implementation of ECC. With collaboration, teachers and other professionals have an opportunity to create an atmosphere where teaching ECC skills and achieving goals in the teacher training become feasible (Lohmeier, 2009:2). Collaboration helps us appreciate that ECC cannot be taught in isolation but as a part of programme that visually-impaired learners receive, with each partner taking up their rightful role.

Collaboration was cited as one of the strategies to enhance the delivery of ECC. There were different aspects which required professionals and parents to work together. IP1 suggested that sensitisation was important to help the community handle persons with disabilities in a positive manner. For IP3, team work could bring about success in the provision of education for learners with visual impairments and that those who have knowledge of the special needs of learners with visual

impairments should take a leading role in advocating for service provision. IP3 advised as follows:

> *I think that should be taken by administration. The lecturers who is specialised can provide information to all the lecturers on how they can handle persons with disabilities. On the resource room, the one who has done specialised studies should advocate for the students.*

The above findings are in line with Lewis and McKenzie (2009: 490) who established that in addition to assessment and instruction, one strategy that can help in delivery of ECC is the teacher of the visually-impaired carrying out advocacy and collaboration. The teacher must be able to explain the importance of the skills and concepts of the ECC to administrators, parents, and other educators who may not understand the need for time and resources to be spent on the ECC.

In agreeing with other participants, students (IP3, IP10) stated that successful implementation can happen when there is consultation at all levels. IP10 stated the following:

> *Then consultation should be done among the people who are past a certain stage. Once that is done, there might be positive progress but … the best progress might not be there because of individual differences and lack of consultancy.*

The role of parents as collaborators was mentioned. IP9 stated the critical role of parents in the overall development of the child with a visual impairment. He shared his experience as follows:

> *First of all, I can say this came from my own parents. The … freedom they used to give me; they never let me be like any other person. … especially my mother … made play around [and] even come back at 19hrs at home ...*

5.3.4.8 Pre-college programmes

Precollege programs are designed to give skills to learners as they transition from high school into college. Transition to college or university has many implications such as a reduction in support and also a time to be alone and manage all aspects of life. It requires preparation both academically and psychologically. The study found

that learners who were trained in ECC skills before entering university or just after, were more able to handle their academic work than those who did not. IP1 and IP2 reported how they had to learn the skills in assistive technology and communication skills to prepare for higher education. IP1 made this submission:

> *Like the school where I was? Yes, in fact at the moment am learning the same skills. I am learning at CDC. There are two instructors teaching both theory and practical especially JAWS* (Job Access with Speech)*, the operations of a computer. Everything about the computer. We're doing practical, opening JAWS, writing using software. At least now I have learnt something.*

Although the university did not have deliberate programme to teach ECC skills to learners with visual impairments the learners found other avenues such as joining in a class doing assistive technology lessons at the curriculum development centre. This finding was in line with Trief and Feeney (2003: 138) who proposed ongoing instruction in ECC as well as transition strategies. It was also established that the teaching of ECC skills to learners who had just lost sight was significant (IP2, IP3). A programme to train learners such as IP2 and IP3 where the affected person is withdrawn from an academic programme to learn braille and then goes back to the normal academic programme should be encouraged. IP3 said:

> *I was there for six months but I learnt braille in two months. The third month we were doing revision.*

Precollege or transition programmes assist learners to prepare and adjust for the next stage in life and academic progress. When transitioning from one stage to another, learners need to be equipped with skills. Trief and Feeney (2003: 137) found that 32% of learners with visual impairments dropped out of college due to challenges in coping with academic and social demands. This scenario could be alleviated by teaching ECC skills to learners as they transition into high school, college or university.

5.4 CHAPTER SUMMARY

This chapter examined the main issues pertaining to constituents of ECC in the schools and also teacher training. The delivery of ECC in teacher training and schools was analysed focusing on methods, personnel, resources and curriculum guidelines. Challenges faced by teacher trainers, curriculum specialists, teachers and learners were presented and discussed. The chapter also looked at the ways ECC relate to other areas of life. Lastly the strategies to enhance the delivery of ECC. It was revealed that teaching of ECC skills was conducted in an uncoordinated manner with several challenges both in teacher training and teaching in schools. A collaborative approach is needed to improve at all levels: curriculum development, teacher training and the actual teaching in schools. The next chapter summarises the findings of the entire study and presents recommendations for implementation and future research.

CHAPTER 6
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

This study was undertaken with the basic purpose of understanding the nature of ECC and the aspects surrounding the teaching of skills to learners with visual impairments in special schools. The study is guided by this main question: what is the state of implementing the ECC in schools for learners with visual impairment? The sub questions of the study were:

- What constitutes ECC for the visually-impaired learners?
- What challenges are encountered in implementing ECC?
- What is the relationship among implementation of ECC, academic and life achievement of the visually-impaired learners?
- What strategies can be employed to ensure effective delivery of ECC?

The aim of this concluding chapter is to present a summary of the study and the major findings. This chapter further highlights conclusions drawn from the findings and finally makes recommendations for practice and further research.

6.2 LIMITATIONS OF THE STUDY

Firstly, some of the participants were known to the researcher and this may have brought some bias in the way responses were given, maybe to make a good impression about issues. To overcome this limitation, I used more than one source of data. I triangulated by using interviews, focus group discussions, questionnaires and document analysis. Further, I employed a multiple case design where teachers, learners, specialists and teacher trainers all discussed the matter at hand. Document analysis equally strengthened the study by shedding light in terms of policy on curriculum for learners with visual impairments. Another mitigation strategy for this limitation was to give the participants their transcripts so that they could check and confirm what was captured in the interviews.

The second limitation could be viewed in terms of the small number of participants. This scenario meant a reduction in sample size of some groups of participants. The researcher alleviated this deficit by conducting lengthy interviews to elicit detailed information from the participants who were available.

Throughout this study, I encountered limitations in terms of literature from local research on ECC. This may give the impression of a biased look at the ECC. To alleviate this I reviewed some studies from researchers in the region to gain an understanding of the provisions of ECC in the African context.

6.3 SUMMARY OF THE STUDY

This thesis consisted of six chapters. In chapter 1, the background to the study was given. This chapter provided an exploration of ECC and why it is important for learners with visual impairments. Gaps were identified which culminated in the formulation of the problem statement where the gap in the ECC provision was clearly stated, giving impetus to the study. I also explained in chapter 1 that the motivation for my study was driven by the deficits in skills experienced by students with visual impairment at university. Another motivation was that as a teacher trainer, I needed to appreciate all issues related to ECC that is teacher training, curriculum provisions and the actual teaching in schools. In this chapter, research objectives were outlined. Other highlight of the chapter were the research questions, purpose and aims as well as the significance of the study. The chapter provided an overview of the methodology and design of the study. The main components discussed were an overview of qualitative methodology, sample size and sampling procedures. Others were instruments used to collect data, data processing and analysis. In this chapter, measures to ensure credibility and trustworthiness of the study were presented in brief. Ethical considerations to ensure protection of participant were highlighted. A number of key terms were defined. The definitions were given to aid understanding of their usage in the context of the study.

The literature review for the study is embedded chapters 2 and 3. Chapter 2 focused firstly on theoretical framework. The theory on dysontogenesis was found suitable to explain the role of ECC in the life of learners with visual impairments. The theory has

two principles: a positive resource-oriented approach and remediation through education. The impact of visual impairment could be minimised by focusing on positive attributes of the learners and not deficits. Attitudes towards the disability are critical in provision of service. Learners with visual impairments have a different developmental path with their own learning strategies which should be nurtured. With positive attitudes, resources and programmes for learners can be availed. ECC is viewed as an avenue to provide a holistic education for the learners, embracing the core curriculum as well as additional skills peculiar to the disability. The chapter also discussed the aspects of the core curriculum before embarking on an in-depth analysis of the components of the ECC. The ECC consist of nine skills areas. These are: compensatory or functional academic skills, orientation and mobility, social interaction skills, career education and independent living skills. Other skills are recreation and leisure skills, assistive technology skills and visual efficiency and self-determination. An analysis of skills areas shed light on expectations of the whole study in terms of the skills which should be contained in the curriculum framework, teacher training and the practice in schools.

The literature on delivery of ECC focused on the following components: teachers training in ECC, personnel teaching skills, methods used to teach skills, the teaching and learning resources available in schools. The teachers of the visually-impaired were teaching both ECC and core subjects which brought a number of challenges. Parents and paraeducators play an important role in teaching ECC. Successful implementation of ECC calls for collaboration or formation of working teams. At the centre of ECC delivery is the need to have well-trained personnel and a whole range of specialised teaching and learning resources.

I also reviewed literature on the challenges encountered in the implementation of ECC. The main challenges were time constraints. Teachers did not have time to teach both ECC and core curriculum contents. Inadequate time to complete tasks compelled teachers to select skills to teach and leave out those perceived to be less important like self-determination. The time teachers spent on ECC was unplanned and unstructured, which limited instructional effectiveness. In some schools, teachers worked outside normal school hours to teach ECC skills. Schools had inadequate numbers of well-qualified teachers. This threatened the delivery of ECC.

Teachers were not competent and confident in vocational skills and use of assistive technology for learners with visual impairments.

In chapter 3, the review of literature focused on the relationship between having good ECC skills, academic achievement and independent living. ECC skills were related to academic success particularly at transitional stages from school to college and college to community life. A good command of ECC skills enabled learners to access subjects in the core curriculum. If a learner acquired keyboard, orientation and mobility and braille skills at primary school, she/he may just need to perfect these at secondary level and increase speed as well accuracy in college or university. Skills in the ECC were perceived to be a tool for equalisation of education opportunities for learners with visual impairments. Competence in ECC had also been linked to positive outcomes by increasing chances of persons with visual impairments to become employable. Employers value employees who have good communication skills, social skills, complete tasks on time, have a positive disposition, use good orientation and mobility skills, and have broad independent living skills. A lack of these skills may be a major contributor to unemployment or underemployment. Skills such as self-determination, social skills, ability to use technological devices and independent travel are major boosters of attitude and confidence for employers to hire persons with visual impairments in a job they are qualified for. A good array of ECC skills for persons with visual impairments is an empowerment strategy. Education is a vehicle for empowerment, more so for persons with disabilities. Knowledge and skills provided through education enable persons with visual impairments to contribute to the well-being of society. A person with a good command of ECC and academic subjects is fully equipped to be competitive in the workforce, and contributes to the economy rather than being dependent on the government for handouts. It may be argued that a blend of ECC and core curriculum would help alleviate some economic and social challenges that visually-impaired persons face. In a nutshell, empowerment for persons with visual impairments may reduce unemployment, reduce dependency and help raise community recognition for persons with visual impairments.

ECC skills have been found to be a tool for social inclusion. Social interactions through technology such as internet, computers and telephones remove social barriers perceived by both the sighted and those with visual impairments and open

doors for interactions in academic and employment circles. It can be concluded that teaching learners to use the internet to conduct research, send emails and network on social media should be part of ECC. Learners with visual impairments who do not develop appropriate socialisation, daily living, and independence skills have great difficulty forming social relationships in adulthood. This may cause them to have fewer or no friends. Therefore, teaching social skills help the learners make good friendships and find acceptance among their sighted peers. Good social and self-determination skills also help learners develop positive self-concept, self-acceptance and the ability to control their emotions.

Chapter 3 further explored the strategies which have been identified to enhance the implementation of ECC. Some strategies include improvement of personnel preparation where teacher training programmes ought to provide adequate skills at pre-service level. In-service skills training for teachers is equally recommended and can offer specific skills such as braille literacy, assistive technology internet use, strategies for teaching specific challenging subjects and production of teaching and learning aids. Using holiday programmes to teach ECC skills is a strategy to overcome the challenge of time. Programmes can be arranged to cover all skill areas or individual needs and can be conducted in colleges and universities during vacations. Including ECC in the core curriculum was proposed. This entails teaching ECC skills within the core subjects. Skills in ECC are identified and incorporated as the core curriculum is taught. A collaborative approach is recommended for the implementation of ECC. With collaboration, teachers and other professionals have an opportunity to appreciate and plan together. The entire educational team needs to reinforce and work as an interconnected team. The family needs to support the instruction that is provided at school and other settings.

Chapter 4 centred on methodology and design. Firstly, the focus was on exploring the qualitative case study design and placing it in a phenomenological philosophical perspective in order to get a better understanding and also give a justification for its selection. The research site and selection of participants were described in detail. Procedures and methods used to collect data were interviews, focus group discussions, questionnaires and policy documents. Methods used in data analysis were presented, giving all the steps and strategies employed. Ways to ensure that the study remained trustworthy were identified and presented in this chapter. The

main principles under trustworthiness are credibility, transferability, dependability and confirmability. Finally, ethical issues and how they were upheld were presented. The findings of the study were presented and discussed in chapter 5.

6.4 SUMMARY OF THE FINDINGS

Participants had knowledge and understanding of skills in ECC and its significance in the life of a person with visual impairments, in terms of access the core curriculum and becoming a responsible member of the community. The curriculum process is guided by the curriculum framework and national policy on education. However, the adapted curriculum in the case of the learners with visual impairments, ECC as mentioned in the curriculum framework, was not outlined in the document to guide stakeholders on teaching. The majority of teachers were aware of content of the core curriculum and what was supposed to be taught but knew little about the ECC. Some skills in the ECC were also present in the core subjects. Core subjects like computer studies were found to be related to assistive technology; business studies to independent living; expressive arts to orientation and mobility. The area of independent living also known as activities for daily living (ADL) was brought out as one area in which most learners were taught skills; the least taught was self-determination.

The majority of teachers in schools did not have training in ECC but were teaching skills to learners. Other people teaching ECC were house parents, parents and siblings. However, parents were not recognised by schools as collaborators in teaching ECC. On some occasions, schools invited other professionals to give talks or specific skills. However, orientation and mobility specialists were not available in all the schools because Ministry of Education did not have any such staff trained or deployed in schools.

There were variations on the schedules of teaching ECC skills in schools. There was no clear timetable and it was at the discretion of the school to decide when to teach ECC skills. The word 'sometimes' was often used to refer to the inconsistencies in time. Schools were unable to teach all ECC skills during the normal school hours. The main reasons for failure to teach ECC were: lack of time allocated in the

curriculum framework to teach ECC; the learning characteristics of learners with visual impairments where both the teacher and learner needed more time for concepts to be fully grasped; and teachers having limited time to teach ECC due to other responsibilities assigned to them by the school. For schools where a schedule was put in place, ECC skills were taught in the afternoons and during the weekends within school premises after learners had learnt the core subjects

An array of methods was used to teach ECC. They included demonstrations or direct instruction, discussion, peer teaching, discovery and group work. Others were role play, question and answer, drill and practice and inquiry. Teachers and learners differed on the most common methods used, demonstrations versus peer teaching respectively. There was general dissatisfaction among learners about methods used to teach ECC because they were inadequate.

The special schools being public institutions obtained most of teaching and learning resources through the Ministry of Education. The procurement of teaching and learning materials was centrally done by government after schools forwarded the lists of resources which were required or the officers decided on their own. This process was cumbersome with many weaknesses and was partly responsible for non-availability of teaching and learning resources.

The training of teachers for learners with visual impairments was done at diploma and degree levels. The teacher trainers echoed that the training provided was not adequate to equip teachers to handle learners in ECC skills. Particularly, methods used to train teachers in ECC were lectures, peer teaching, group work, demonstration and practice, research and excursions. However, the lecture method was the main method used. The use of this method as a predominant one was as serious weakness. The major challenges experienced in teacher training for learners with visual impairments were: lack of time to cover the work in the training schedule; holistic training in a Bachelor's degree without specialisation in blind education; inadequate methodologies used in training; heavy reliance on lecture methods at the expense of demonstrations and excursions; short supply of training materials compounded by cumbersome procurement procedures and non-availability of the specialised materials in the country; and insufficient teaching staff. The challenges encountered during teacher preparation were so severe, that indeed, the graduates

from the programmes were not well-equipped to impart skills to the learners. Deficits in teacher training, coupled with other issues, manifested in the skills learners exhibited at the different stages of transitioning.

Generally, participants agreed that ECC was essential for persons with visual impairments. The strong relationships established between having ECC skills, academic and life achievement were sufficient evidence to give advocates of ECC a platform to push for the implementation of ECC. ECC skills were related to being able to learn subjects in the core curriculum. Skills in orientation and mobility enabled the learner to go to class to learn core subjects while skills such as braille were linked to literacy in the subject, English. ECC skills were linked to academic transitioning. Transitioning from one academic level to another was related to the level of use and requirement of ECC skills. The level of demand for ECC skills during transitioning depended on previous teaching of skills and the demands of a particular stage of transitioning. Transitioning to university improved social interaction through technology use and positively influenced acceptance in social circles. Socialisation and technology use enhanced confidence in the visually-impaired to become active members of society. Skills in ECC could determine whether someone continued with an academic programme or dropped out completely. Skills, especially assistive technology, independent living and compensatory and functional academics, were viewed to be avenues to becoming employable and economically empowered. Further, skills in sport and music were found to be a vehicle to self-employment and self-reliance. ECC fostered independent living. Independent skills such as personal hygiene and time management were related to reduction in dependence on others for support.

The implementation of ECC is hampered by a number of challenges. Attitudes of teachers, families of learners, learners themselves and officials in the Ministry of Education were not favourable to the implementation of ECC. This scenario is complicated and one doubts how successful programmes could be if the stakeholder do not support one another. Lack of teaching and learning resources is one of the most serious challenges. Although there were donations of materials and schools made some of the aids, these were not sufficient to cater for the many types of specialised materials and equipment required in both ECC and core curriculum. Text books in the correct medium and in braille were not available in schools. Another

area facing challenges was assessment. The main issues were: unpredictable feedback in examinations for learners; assessment tasks in incorrect media and uncoordinated assessment of learners prior to enrolment. There was no clear path in assessment which resulted in delayed placement. There was lack of teamwork by professionals to assess children for visual impairments. This resulted in delays in placement of learners as well as onset of intervention programmes.

Shortages of staff like orientation and mobility specialists in schools affected implementation of ECC. As a result, learners were not satisfied with the methods used to teach ECC like orientation and mobility. Insufficient staff was compounded by multi-tasking by teachers who were knowledgeable about ECC skills. The teachers were also involved in other school activities like administration and teaching many other skills and subjects in the core curriculum. Lack of time was found to be the second serious challenge. Schools did not have fixed schedules or timetables for teaching ECC. Most of the ECC skills were not included in the timetable and were taught mainly without a clear schedule. Some teachers had difficulty blending teaching and other responsibilities and some teachers worked beyond school hours to maximise instruction. Lack of incentive to encourage teaching of ECC was not in place and teachers and curriculum specialists confirmed that this was a serious demotivation.

There were a number strategies proposed to improve the implementation of ECC. Participants stated the following to alleviate difficulties in the delivery of ECC: enhance personnel preparation and deployment, allow specialisation, embrace technology and offer in-service training; provide teaching and learning resources; enhance learner assessment prior to enrolment; provide feedback on tests and examinations for the learners' academic progression; include ECC skills in teacher training and in-service courses; align curriculum to accommodate ECC (combining the teaching of ECC and the core subjects to reduce duplicating skills); engage school administration in resource mobilisation; schedule time to implement ECC; advocacy and collaboration in sensitization to help improve attitudes, resources provision, assessment, personnel preparation and parent involvement; and precollege programmes to offer skills to learners in ECC skills before entering university or college.

6.5 CONCLUSIONS

Currently, the implementation of ECC is done without a tangible curriculum guide. Schools decide skills to teach and leave out those skills deemed less important. Indeed, without clear guidelines, implementation of ECC will remain a dream, while learners are denied full access to education and a well-adjusted life. The lack of ECC has implications in that provision of personnel, assessment, scheduling of teaching and provision of teaching and learning resources becomes difficult to coordinate.

Teachers, curriculum specialists, teacher trainers and learner are aware that ECC skills are a necessity for learners with visual impairments. Unfortunately, this realisation has not been translated into developing ECC. Now that stakeholders are aware of the role of ECC, they need to come together to formulate plans for including and implementing ECC. Collaboration is key to the realisation of the dream to have ECC. At present, collaboration is not well-coordinated and learners are receiving a raw deal.

Participants brought out a number of barriers to successful implementation of ECC. Barriers ranged from undesirable attitudes, inadequate curriculum guides and lack of skilled manpower to inadequate resources for teaching and learning. The suggested strategies to overcome challenges should assist stakeholders give impetus to implementation of ECC. Strategies such as curriculum alignment, increased time in teacher training and provision of resources for teaching and learning should be seriously considered if ECC implementation is going to be achieved. It can be concluded that the responsibility to give structure to ECC is an enormous one, but the first step should be to establish or develop an ECC framework to clearly stipulate the skills learners must obtain.

6.6 RECOMMENDATIONS

Generally, there is inadequate attention given to the implementation of ECC skills for learners with visual impairments. There is need to consider that without ECC skills learners have serious limitations in accessing the core curriculum on which emphasis is placed. It has been established that there is a problem with this aspect

and much has to be done to make provision for learners. The challenges that were mentioned can be overcome and indeed it is possible with concerted effort and dedication. The study makes the following specific recommendations on the way forward in implementation of ECC.

- **Strengthen the curriculum framework**

The curriculum framework in its current state does not give guidance on the implementation of ECC; in fact, the document only mentions braille. This inadequate curriculum guide is a risk to the education of learners with visual impairments. The curriculum framework should be strengthened to include ECC skills for learners with visual impairments. The curriculum framework should include schedule for teaching the skills as well. When this is done, uniformity and consistency in all schools would prevail. Curriculum strengthening should also include aligning teacher training curriculum to the curriculum framework for schools. The two curricula need to be in harmony. That way gaps would be closed and there would be assurance that teachers would impart skills in which they have been trained.

- **Enhance teacher training to focus on all areas of ECC**

Well-trained teachers are a key determinant in the success of education programmes. Teacher training for ECC should embrace the following aspects: duration of training and specialised training. The duration of training has been a challenge where teachers graduate without enough skills to transfer to learners. Teacher training should accord enough time to practical skills in ECC. This call for review of current programmes at colleges and university. Training in ECC should offer a specialised diploma or degree programme in visual impairments. When teachers specialise, more time and resources are needed. Specialised training is a way or strategy to implement inclusiveness. Without specialised teachers who have skills and knowledge, learners, though placed in special schools, remain isolated and excluded from access and full participation in education and the other spheres of society.

- **Strengthen collaboration**

A collaborative approach to the education of learners with special needs is recommended, more so for those with visual impairments. All activities put forward as strategies, such as resources mobilisation and assessment, require teamwork,

consultative approaches and tapping into and creating a pool of experts. Collaboration at all levels should be done, beginning with developing of curriculum, teacher training and implementation in schools. ECC teams should provide an on-going monitoring of teaching of skills in schools.

- **Mechanism for coordinated purchase and supply of teaching resources**

Government is main funder of the public schools and the institutions of training. The current system of procurement of teaching and learning resources which has been described as cumbersome should be reviewed to have a system where the period between purchases is reduced and consultations on requirements between schools and government are conducted in a transparent manner to avoid purchases that are not needed in schools or teacher training institutions. Production of braille materials should be decentralised to provinces to speed up the production of books in braille. The government, schools and teacher training institutions should work with other partners who have in the past provided schools with specialised equipment.

- **Planning for transitioning of learners**

Transitions in the life of learners with visual impairments require thoughtful consideration. Transitions should be well-planned and embedded in the main programme for learners. This will enable assessment of skills needed for the next stage. Precollege and holiday programmes should be part of the transitioning plan for individual learners. Transitioning programmes will give the institution or the teacher in the next grade an opportunity to plan for the learner by determining skills to be sharpened.

- **Strengthen parental involvement**

Most often teachers and parents do not recognise each other as partners in education of learners with visual impairments. ECC skills are life skills in which parents or guardians should be interested. Teachers should take a leading role in making sure this relationship becomes viable. Most of the ECC skills should be taught at home and in the school environment, with the two complementing one another. The apparent ignorance displayed by teachers on the role of parent in education of learners with visual impairments was worrisome. There is need to have deliberate programmes developed (individualised plans) where the role of parents in

teaching specific skills is clearly spelt out and school should engage parents as key collaborators.

- **Attend to the negative attitudes**

Negative attitudes of parents, teachers, Ministry officials and the learners have the potential of crippling any programme. The negative attitudes within schools should be addressed by specialised teachers with the support of school administration through sensitisation. It is the role of teachers to be advocates for the learners. Community awareness groups should be formed to assist change the mindset of people towards disability. Parents should be involved in teaching teams. For the learners with visual impairments who have negative perceptions about ECC skills, teachers should offer counselling on the importance of skills and how a lack of these would undermine their development in all circles of life.

- **In-service Training**

Training programmes for teachers already in special schools should be developed. The nature of programmes should focus on ECC skills and making teaching and learning aids. Short refresher courses should be ongoing. Curriculum development centres and teacher training institutions should spearhead these activities.

- **Embracing assistive technology**

Assistive technology has been known to enhancing teaching and learning for learners with visual impairments. The need to have AT both in training institutions and schools is cardinal. Assistive technologies can be obtained through collaboration of various stakeholders.

6.7 RECOMMENDATIONS FOR FURTHER RESEARCH

- This study combined both blind and learners with low vision: further studies could be done on the learning of the separate groups.

- The attitudes of stakeholders in the education of learners with visual impairments need to be further investigated.

- Further investigation could be done to assess the status of parent involvement or education of learners with visual impairments. This emanates from the submissions of teachers where parents were viewed in two contradicting positions.

6.8 SUGGESTED EXPANDED CORE CURRICULUM MODEL

The model of implementing ECC which I propose was arrived at after analysing the literature, my findings and conclusions as well as recommendations of the study.
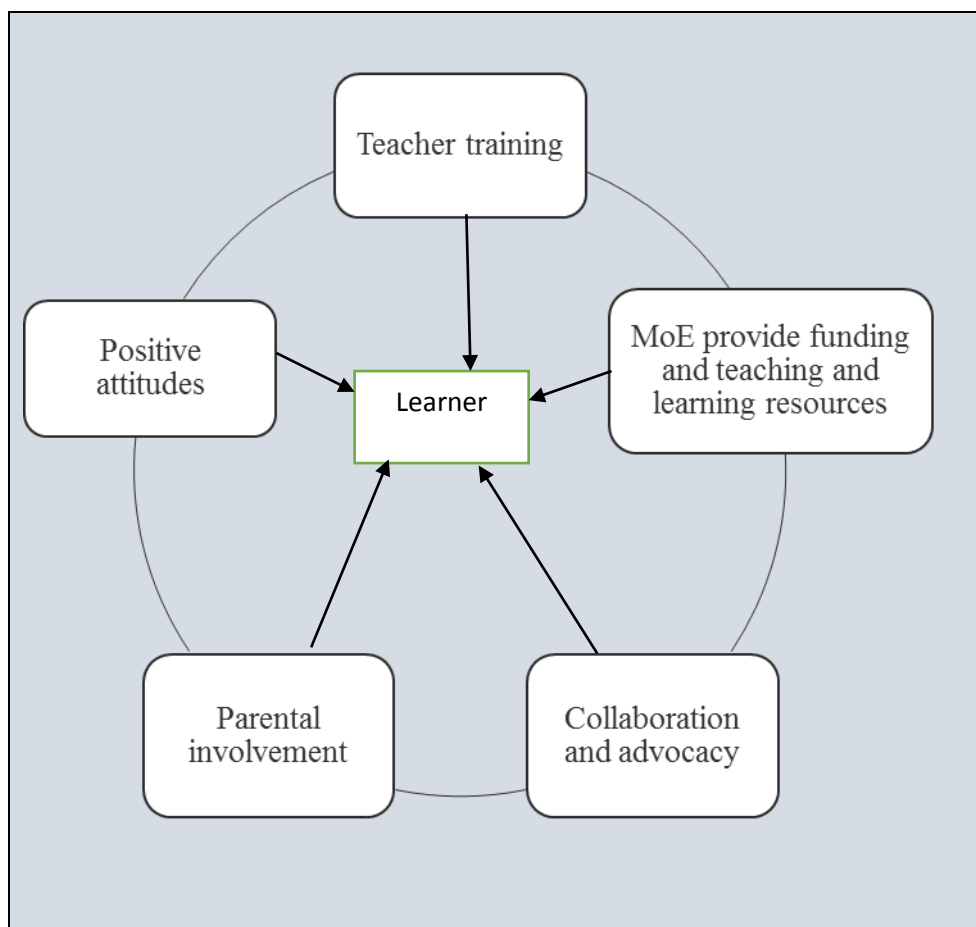

Figure 6.1: Expanded Core Curriculum Model

In the model ECC is represented in the grey background, surrounding all other issues in ECC. The model proposes a collaborative approach in implementation of ECC where all aspects are of equal importance to the success of the process. At the moment, the ECC is not written down for all stakeholders to be guided. Therefore, team work in formulation of the policy should be embraced. The assumption is that

the development and availability of ECC will enable all stakeholders to speak with one voice.

With a curriculum in place, a platform to revise and enhance teacher training for ECC would be created to offer comprehensive skills and knowledge in a specialised manner. Therefore, curriculum in teacher training will be aligned to skills taught in schools. It should be expected that teacher training and the school will equally receive funding and resources from MoE and other partners for implementation of ECC.

For the ECC implementation to be successful, positive attitudes of critical partners are crucial. It came out strongly in the study that attitudes of teachers, learners, Ministry officials and parents of learners were not favourable. Positive attitudes and advocacy should be part of teacher training. Teachers should, in turn, counsel learners on ECC and use collaborative and advocacy skills to change perceptions of team members, other professionals and the community at large.

In conclusion, this model shows that ECC should be formulated in a collaborative manner to ensure that teacher education encapsulates skills, knowledge, values and attitudes. With the provision of resources by government and donor partners, it is hoped that the principles of theory on dysontogenesis, namely a positive resource orientated approach and remediation through education should become a reality in implementation of ECC in special schools for learners with visual impairments in Zambia.

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APPENDICES

APPENDIX A1: Focus group discussion protocol for learners with visual impairments in special schools

1.   Do you know anything about the expanded core curriculum skills? Is it part of the school time table or is it done without a plan?

2.   Who teaches you these skills and what methods or ways do they use to teach?

3.   Why do you think these skills are important and how do you use them in your daily life, in school and at home?

4.   Elaborate on the study materials that are used in your school to teach learners with visual impairments, who is providing such study materials?

5.   Explain the difficulties and challenges, academically or socially, that you are experiencing at the school and how do you think they can be resolved?

6.   Is there any additional information that you would like to share with me?

APPENDIX A2: Interview protocol for university lecturers and institute of special education

1. How long have you been involved in training teachers of learners with visual impairments?

2. Tell me more about the expanded core curriculum (ECC), its specific areas and the amount of time you spend teaching each area? Does it form part of the curriculum in your institution?

3. Elaborate on the teaching methods that you use to train teachers in order to impart ECC skills to their learners?

4. Give me a brief background about the other stakeholders that you work with when training teachers ECC skills and what are their specific roles?

5. Do you offer short intensive programmes for teachers of learners with visual impairments and state what the training is all about?

6. Explain the challenges that you are experiencing when you are training teachers for learners with visual impairments and how do you think these challenges can be resolved?

7. Is there any additional information that you would like to share with me?

APPENDIX A3: Interview protocol for the curriculum specialists

1. How long have you been in the curriculum development for the learners with visual impairments and what is your area of specialisation in special education?

2. Besides the core subjects in the curriculum, what other skills are contained in the curriculum for teaching learners with visual impairments?

3. Describe the process of curriculum design, implementation and monitoring and the persons involved.

4. Are there policy guidelines on expanded core curriculum for the learners with visual impairments?

5. Tell me more about the teaching and learning resources that are available for the learners with visual impairments and how are they are distributed to schools?

6. Give me a brief background about the partners that work with your department regarding the ECC skills and the areas that you collaborate in.

7. According to your knowledge, is there a curriculum that is specifically developed to train teachers of learners with visual impairments?

8. Explain the challenges that you encounter during curriculum design, implementation and monitoring.

9. Is there any additional information that you would like to share with me?

APPENDIX A4: Interview protocol for university students with visual impairments

1. Tell me about the skills that you learned at school before you enrolled at the University and the person who taught you those skills.

2. What do you know about the expanded core curriculum skills and how are they taught?

3. Do you think you learned most of the skills at school, if no, which skills didyou not learn and why?

4. According to your knowledge, were the ECC skills featured in the school time table or was it done without a plan?

5. Do you have any suggestion on what methods teachers can use to teach ECC skills?

6. Which new skills have you learnt in the University and how useful are they?

7. Do you know of a programme which is available in the University to teach students with visual impairments ECC skills? If yes, have you participated in it?

8. Explain the most serious challenges academically or socially, that you are experiencing at the University and how do you think they can be resolved?

9. Is there any additional information that you would like to share with me?

APPENDIX A5: Questionnaire for teacher who teach learners with visual impairments

Instructions: Write your responses in the spaces provided.

A. BACKGROUND INFORMATION

1.   Your gender   Male   Female

2.   Your qualifications

> Certificate

> Diploma

> First degree

> Master's degree

3.   Experience in teaching learners with visual impairments

> 0-1 5 years   5 – 10 years

> 10 – 20 years

> 20 – 30 years

> 30 years and above

4.   Range of grade of pupils taught

> 5 – 7

> 8 – 9

> 10 – 12

B. CURRICULUM CONTENT AND ACCESSIBILTY

5.   What subjects do you teach the learners with visual impairments?

_____   _____

_____   _____

_____   _____

_____   _____

6.   What curriculum do you follow when teaching learners with visual impairments?

_____

7.   What other skills besides those stated in question 5 do you teach the learners with visual impairments?

_____

8.   What challenges do learners with visual impairments face in accessing the core curriculum?

_____

9.   Is the curriculum clear on what you are expected to teach? Yes   No

10.   If your response to question 9 is NO, what is not clear?

_____

11.   Do you understand the expanded core curriculum (ECC)? Yes   No

12.   Please select the ECC skills that you teach from the list below
      1.   Orientation and mobility
      2.   Career and life management
      3.   Visual efficiency
      4.   Assistive technology
      5.   Social skills
      6.   Independent living
      7.   Functional and academic compensatory skills
      8.   Recreation and leisure
      9.   Self determination

C. TIME TABLE

13.   Is there a time table for teaching ECC skills?   Yes   No

14.   If the answer to question 131 is NO, When do you teach these skills?

_____

15.   Are you able to cover all ECC skill areas in the time that learners are in the school? Yes   No

16. Give reasons to explain your response in question15.

    _____

17. Besides the school time table, what times and places outside the main time table are ECC skills given?

    Time

    Place

    Skill

D. MATERIALS AND EQUIPMENT

18. What training do you have in teaching ECC?

    _____

19. Please list the resources or materials that are available for use in teaching ECC skills?

    _____

20. Where are the teaching and learning materials obtained? Tick from the list below.

    1.   Curriculum development centre

    2.   Donors

    3.   School administration buys

    4.   I make them

E. COLLABORATION

21. Which other professionals help you in teaching ECC skills?

    _____

22. Name the professional and the specific skills that they teach?

    Name of professional

    Skills taught

23. What methods do you use to teach ECC skills?

    _____

24. What role or support is the school administration rendering in teaching ECC skills?

    _____

25. What are the benefits of ECC skills for the learners with visual impairments?

   _____

F. ALIGNMENT OF ECC SKILLS AND CORE CURRICULUM

26. What is the link among skills in the core curriculum and ECC skills?

   _____

27. Is there any link between the core curriculum and ECC skills?

   _____

28. Mention some examples of skills areas falling in both core curriculum and ECC areas.

   CORE SUBJECT

   ECC AREA

   COMMON SKILLS

29. Suggest the best methods of aligning these skill areas during teaching?

   _____

G. CHALLENGES AND OPPORTUNITIES

30. What challenges do you experience when teaching ECC skills?

   _____

31. Suggest ways of overcoming the difficulties stated in question 30?

   _____

THE END

APPENDIX B: LETTER REQUESTING PERMISSION TO ZAMBIA MINISTRY OF EDUCATION

The Permanent Secretary	C/o School of Education
Ministry of Education	University of Zambia
P.O Box	Dept. of EPSSE
Lusaka	P.O Box 32379
	Lusaka
	25th August, 2015

Dear Sir

RE: REQUEST TO CONDUCT RESEARCH ON LEARNERS WITH VISUAL

IMPAIRMENTS

I am a lecturer at the University of Zambia in the Department of Educational Psychology, Sociology and Special Education currently enrolled as Doctor of education (DED) candidate at the University of South Africa (UNISA). I am doing research in the Department of Inclusive education towards a Doctoral degree. The study is entitled **Assessing expanded core curriculum for learners with visual impairments in special schools.**

The study will entail teachers completing a questionnaire. The pupils will have focused discussion groups. Curriculum specialists and learners at the University of Zambia will be part of the respondents as well. The data collected will be used for academic purposes only. The participants' privacy, identity and confidentiality will be protected. Participation in this study is voluntary; therefore, participants may withdraw without penalty.

The benefits of this study are that information obtained will enable stakeholders broaden understanding of expanded core curriculum and it is likely to influence provision on education for learners. Another benefit is that curriculum issues for

learners with visual impairments will receive detailed scrutiny and bring about some innovation.

The institutions will receive feedback on the study outcome in the form of seminar presentation and the report will be made available for reference.

I therefore, seek permission to carry out the said study in the special schools, curriculum development centre, university of Zambia and Zambia institution of special education.

Yours Sincerely

Magdalene Simalalo - Daka (50790773)

Student - UNISA

APPENDIX B1: PERMISSION FROM THE MINISTRY OF EDUCATION

All communications should be addressed to:
The Permanent Secretary, Ministry of General Education
Not to any individual by name

Telephone: 250855/251315/251283
251293/211318/251291
251003/251319

In reply please quote
No................................

REPUBLIC OF ZAMBIA

MINISTRY OF GENERAL EDUCATION

P. O. BOX 50093
LUSAKA

19th September, 2015

Ms Magdalene Simalalo
C/O School of Education
University of Zambia
Department of EPSSE
P.O. Box 32379
LUSAKA

RE: REQUEST TO CONDUCT RESEARCH ON LEARNERS WITH VISUAL IMPAIRMENTS

Reference is made to your correspondence dated 26th August, 2015 on the above captioned subject matter.

I am pleased to grant you permission to conduct research entitled Assessing Expanded Core Curriculum for Learners with Visual Impairment in Special Schools on learners with visual impairments in selected schools in Western, Luapula and Northern Provinces.

This permission is granted on conditions that the information obtained will be used for academic purposes only and that your activities in schools should not disturb the teaching and learning times of teachers and learners involved. The Ministry will appreciate to be updated on the findings of your research.

By copy of this minute, Provincial Education Officers for Western, Luapula and Northern provinces are informed accordingly.

Henry C. Tukombe
PERMANENT SECRETARY
MINISTRY OF GENERAL EDUCATION

Cc.   Provincial Education officers
-    Luapula Province
-    Western Province
-    Northern province

APPENDIX C: CONSENT LETTER

Dear Parent

Your son/daughter/child is invited to participate in a study entitled Assessing expanded core curriculum for learners with visual impairments in special schools. I am undertaking this study as part of my doctoral research at the University of South Africa. The purpose of the study is the implementation of the expanded core curriculum for the visually-impaired and the possible benefits of the study are the improvement of teaching of additional skills to the learners with visual impairments. I am asking permission to include your child in this study because he/she is a learner who is visually-impaired and is the best to take part in the study as it directly concerns him/her. I expect to have 30 other children participating in the study.

If you allow your child to participate, I shall request him/her to take part in a group interview where questions on the topic will be asked and the child will discuss and share view with friends in the group.

Any information that is obtained in connection with this study and can be identified with your child will remain confidential and will only be disclosed with your permission. His or her responses will not be linked to his or her name or your name or the school's name in any written or verbal report based on this study. Such a report will be used for research purposes only.

There are no foreseeable risks to your child by participating in the study. Your child will receive no direct benefit from participating in the study; however, the possible benefits to education are an increased awareness on the nature and significance of expanded core curriculum and improvement in its delivery and finally an improved access to core curriculum by visually-impaired learners. Neither your child nor you will receive any type of payment for participating in this study.

Your child's participation in this study is voluntary. Your child may decline to participate or to withdraw from participation at any time. Withdrawal or refusal to participate will not affect him/her in any way. Similarly, you can agree to allow your child to be in the study now and change your mind later without any penalty.

The study will take place during regular classroom activities with the prior approval of the school and your child's teacher. However, if you do not want your child to participate, an alternative activity will be available.

In addition to your permission, your child must agree to participate in the study and you and your child will also be asked to sign the assent form which accompanies this letter. If your child does not wish to participate in the study, he or she will not be included and there will be no penalty. The information gathered from the study and your child's participation in the study will be stored securely on a password locked computer in my locked office for five years after the study. Thereafter, records will be erased.

If you have questions about this study please ask me. My contact number is +26099397283 and my e-mail is mmsimalalo@yahoo.co.uk. Permission for the study has already been given by the permanent secretary in the Ministry of education and the Ethics Committee of the College of Education, UNISA.

You are making a decision about allowing your child to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. You may keep a copy of this letter.

Name of child: _____

Sincerely

Magdalene Simalalo

Student - UNISA

_____   _____   _____

Parent/guardian's name (print) Parent/guardian's signature: Date:

_____   _____   _____

Researcher's name (print)   Researcher's signature   Date:

APPENDIX D: ASSENT LETTER

Dear _____

I am doing a study on expanded core curriculum for learners with visual impairments as part of my studies at the University of South Africa. Your Head Teacher has given me permission to do this study in your school. I would like to invite you to be a very special part of my study. I am doing this study so that I can find ways that teachers, curriculum planners and teacher trainers can use to understand and implement the expanded core curriculum better. This will help you and many other learners of your age in different schools.

This letter is to explain to you what I would like you to do. There may be some words you do not know in this letter. You may ask me or any other adult to explain any of these words that you do not know or understand. You may take a copy of this letter home to think about my invitation and talk to your parents about this before you decide if you want to be in this study.

I would like you to take part in a group discussion with your friends. I am going to ask you questions as a group and you will be expected to each give your views on the question asked. You are free to agree or disagree with your friends and give your own responses.

I will write a report on the study but I will not use your name in the report or say anything that will let other people know who you are. You do not have to be part of this study if you don't want to take part. If you choose to be in the study, you may stop taking part at any time. You may tell me if you do not wish to answer any of my questions. No one will blame or criticise you. When I am finished with my study, I shall return to your school to give a short talk about some of the helpful and interesting things I found out in my study. I shall invite you to come and listen to my talk.

If you decide to be part of my study, you will be asked to sign the form on the next page. If you have any other questions about this study, you can talk to me or you can have your parent or another adult call me at: 0977397283. Do not sign the form until you have all your questions answered and understand what I would like you to do.

Researcher: Magdalene Simalalo Phone number: +260977397283

Do not sign written assent form if you have any questions. Ask your questions first and ensure that someone answers those questions.

****

WRITTEN ASSENT

I have read this letter which asks me to be part of a study at my school. I have understood the information about my study and I know what I will be asked to do. I am willing to be in the study.

Learner's name (print)   Learner's signature

Date:

Witness's name (print)   Witness's signature Date:

(The witness is over 18 years old and present when signed.)

Parent/guardian's name (print) Parent/guardian's signature: Date:

Researcher's name (print) Researcher's signature: Date:

APPENDIX E: ETHICAL CLEARANCE CERTIFICATE

UNISA | university of south africa

COLLEGE OF EDUCATION RESEARCH ETHICS REVIEW COMMITTEE

17 June 2015

Ref #:**2015/06/17/50790773/05/MC**
Student #: Ms M Simalalo
Student Number #: 50790773

Dear Ms Simalalo

Decision: Ethics Approval

Researcher
Ms M Simalalo
Tel: +260 21191 381/+260 97739 7283
mmsimamalo@yahoo.co.uk/50790773@mylife.unisa.ac.za

Supervisor
Prof VG Gasa
College of Education
Department of Inclusive Education
Tel: +2712 429 4470
gasavg@unisa.ac.za

Proposal: Assessing the expanded core curriculum for the learners with visual impairments in special schools

Qualification: D Ed in Inclusive Education

Thank you for the application for research ethics clearance by the College of Education Research Ethics Review Committee for the above mentioned research. Final approval is granted for 2 years.

For full approval: The application/ resubmitted documentation was reviewed in compliance with the Unisa Policy on Research Ethics by the College of Education Research Ethics Review Committee on 17 June 2015.

The proposed research may now commence with the proviso that:

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the College of Education Ethics Review Committee.*

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
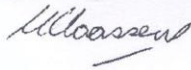Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.

3) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.
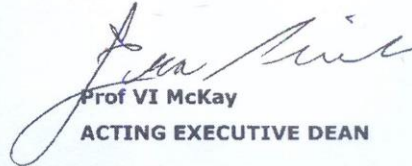
Note:

The reference number **2015/06/17/50790773/05/MC** should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the College of Education RERC.

Kind regards,

Dr M Claassens
CHAIRPERSON: CEDU RERC
mcdtc@netactive.co.za

Prof VI McKay
ACTING EXECUTIVE DEAN