UNIVERSITY OF EDUCATION, WINNEBA

OPINIONS OF TEACHERS ABOUT TEACHING PUPILS WITH VISUAL IMPAIRMENT IN ADA EAST DISTRICT IN THE GREATER ACCRA REGION

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A DISSERTATION IN THE DEPARTMENT OF SPECIAL EDUCATION, FACULTY OF EDUCATIONAL STUDIES, SUBMITTED TO THE SCHOOL OF RESEARCH STUDIES, UNIVERSITY OF EDUCATION, WINNEBA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR AWARD OF THE MASTER OF EDUCATION (SPECIAL EDUCATION) DEGREE

DECEMBER, 2017

DECLARATION

Student's Declaration

I, Agbenyefia Xorsenyo, hereby declare that except for references whose sources have been duly acknowledge, this dissertation is the result of my own work and that it has neither in part nor whole been presented elsewhere.

Signature: ……

Date: ……

Supervisor's Declaration

I hereby declare that the preparation and presentation of this research was supervised in accordance with the guidelines of supervision of dissertation as laid down by the University of Education, Winneba.

Supervisor's Name: Dr Awini Adam

Signature: ……

Date: ……

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To God be the glory. I am grateful to the master of the universe for His care, protection and mercies throughout the difficult times and for the wisdom He has given me to come out with such an excellent piece of work. I am also deeply grateful to my supervisor Dr. Awini Adam who in the face of his busy schedules took time to enlighten me, read through this work and did the necessary corrections. His comprehensive remarks, suggestions and constructive criticism led to the accomplishment of this research work.

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DEDICATION

This research work is dedicated to my parents, Mr. and Mrs. Kwablatse, my husband, Mr. Amenyogbe Frank, and my daughter, Amenyogbe Annabel, whose supportive prayers have sustained and brought me to this far.

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ABSTRACT

The purpose of this research was to find out the opinions teachers have about teaching pupils with visual impairments in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana. The cross-sectional design was used. The sample size was 50 and a simple random technique was used to select a sample size. The research instrument used was a Likert scale questionnaire. The quantitative data from the questionnaire were analysed with simple percentages and the results were represented on frequency tables. The study found that there are negative opinions among teachers when it comes to their quest to teach children who are visually impaired in inclusive classrooms. Again, it was established that some of the factors that inform teachers' opinions include inadequate training, inability to read Braille, lower levels of experience with the teaching of children who are visually impaired, and inadequate resources for teaching, among others. The study further found that there were inadequate resources available for the effective teaching of children who are visually impaired in the inclusive schools where the study was undertaken. It also came to light that some other challenges identified with the resources included, but not limited to, the unavailability of embossers, braille sheets, and reading stands that would ensure smooth teaching and learning in these schools. Based on the findings, the researcher recommended that the government must encourage greater awareness of issues concerning disability. Also, the Ghana Education Service should organize in-service training for the teachers to ensure that they acquire the requisite skills to manage these classes of pupils in the inclusive setting. Again, it was recommended that the government and other stakeholders should ensure that there are in-service trainings that would help teachers in inclusive classrooms to acquire knowledge on how to use assistive devices.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Pupils with visual impairments globally are required to enjoy the good intentions of Education for All (EFA) movement which is an UNESCO strategy to ensure provision of equal and quality education to all pupils, notwithstanding their socio-economic and cultural backgrounds, ethnicity or disabled conditions. The mission of teaching pupils with visual impairments is to provide all persons involved in the pupil's education with the necessary access to education and life. According to the World Health Organization (WHO) (2011), access, which is the key to inclusion, involves much more than providing ramps. Again, placing a pupil with a visual impairment in a regular classroom does not necessarily provide access and the pupil is not necessarily included.

A pupil with visual impairment, who does not have access to social and physical information because of the impairment, is not included, regardless of the physical setting. Pupils with visual impairments will not be included unless their unique educational needs for access are addressed by specially-trained personnel in appropriate environments and are provided with equal access to core and specialized curricula through appropriate specialized teachers, books, materials and equipment.

Consequently, numerous countries worldwide, including Ghana, were among the forefront countries to ratify the Salamanca Statement, and other various United Nations documents fighting for the rights of pupils including those with disabilities to be educated in inclusive settings (Tanzania Federation of Disabled People Organizations-TFDPO, 2010). For instance, as a signatory to the Jomtien Declaration on EFA, one of the striking practical steps Ghana has taken in the attempt to deliver

education to her citizens, including those with disabilities has been the introduction of Universal Primary Education. As a result, for these initiatives to keep improving, one important milestone in favour of pupils with disabilities was the implementation of inclusive education.

In many cases, teachers have developed lots of negative opinions about including persons with visual impairments in their regular classrooms. The perceived inability of people with visual impairments results from the limitations imposed on them by society, which through ignorance continues to avoid or even be afraid of visual impairment (Taylor, Pezzullo, & Keeffe, 2006). Teachers are key implementers of any education policy, and their views, opinions and perceptions are very vital towards success or failure of the policy.

According to Education Sessional Paper (2005), the Government of Ghana aims at paying special attention to gender, vulnerable, and disadvantaged pupils. It is therefore, the policy of the government that pupils with visual impairments are not excluded from mainstream education. Following the declaration of free primary education in Ghana and the continued commitment to Universal Primary Education, additional demand from pupils with special needs has been created. Despite all these good intentions, it is estimated that pupils with visual impairments have the lowest access and participation rate in Ghana (Ghana Society for the Blind, 2008). Enrollment, attendance and completion of the formal education system are low. This has been attributed to stigmatization, retrogressive cultural beliefs, poor attitudes and ignorance on potential of pupils with visual impairments by parents. So, according to the Ghana Society for the Blind, most parents do not enroll their children with visual impairments in school, and a significant number of the affected pupils live a neglected life and are often kept away from general public.

Kumah (2001) stated that the emphasis placed on visual presentation of learning materials, and complex concepts and information in classrooms pose significant challenges to learning among pupils with visual impairment. Without systematic instructional attention to these challenges, learning may seem inaccessible to many pupils with visual impairments. Unfortunately, Stefanich and Norman (2006) found that most teachers and college educators have little or no direct experience in teaching pupils with visual impairments and often hold stereotypical views of what they can and cannot do.

Integration has become a critical part of the reform effort to improve the delivery of services to pupils with disabilities by focusing on the placement of these pupils in general education classes. Public schools have an obligation to provide free education in the least restrictive environment possible to all pupils who have diagnosed conditions of exceptionality (UNESCO, 2005). Integration is about the child's right to participate in education and the school's duty to accept and ensure this right. It is thus, about rejecting exclusion of learners, restructuring school policies, curricula and practices so that all learning needs can be met. "Only by removing physical and social barriers to learning can we create truly inclusive classrooms and societies and speak of EFA in a holistic sense (African Forum, 2007, p. 56).

In many cases, it is observed that the few committed teachers of children who are visually impaired in the regular school system also become impaired in one way or the other due to the lack of inadequacy of the necessary logistics and accoutrements for effective delivery of their duties as professionals. As a result, it is obvious to find that the sufferers then become the pupils with visual impairments who find their way into the regular education streams.

Several factors can be attributed to the varying views and opinions of teachers in the area of teaching pupils with visual impairments in the regular education classrooms. Some of these reasons might be as a result of tradition or academic or both. Government policies and their implementations might also contribute a great deal in informing the views and opinions of regular class teachers about pupils with visual impairments. Gronlund, Lim, and Larsson (2010) pointed out that the reason for teachers' varying views on pupils with visual impairments can be due to lack of specific policies stating how inclusive education should be provided and implemented. For example, Gronlund, et al. reported that the National Disability Policy, introduced in 2004, failed to clearly state and provide guidelines on how inclusive education to pupils with disability should be implemented and monitored. In the view of these scholars, lack of guidelines and efforts to facilitate preparation of conducive environment lead to poor implementation of inclusive education. One of the areas affected by the lack of effectiveness in provision of inclusive education is the recruitment of adequate number of general education teachers to teach in secondary schools (Mmari, Mzee, & Frankenberg, 2008).

A very important aspect of teaching pupils with visual impairments in the inclusive classroom that informs the opinions of teachers is connected with the acquisition and use of the required resources. Resources come in the form of finances, equipment and personnel needed for the success of teaching and learning. Teachers must be familiar with resources, as well as their ability to design, select and modify these resources for pupils with visual impairments in the inclusive settings. It is very necessary for administrators who are responsible for providing appropriate facilities, technical assistance and educational service delivery to pupils with visual impairments in the regular school system to acquire the necessary training related to

the locating and/or producing the resources needed to implement high quality programs.

Again, globally, many teachers have complained a great deal about several other challenges that might also contribute to teachers' difficulty in accepting pupils with visual impairments into their classrooms. According to Musikhe (2006), teachers face major challenges when it comes to teaching pupils with visual impairments, and there is not enough attention paid by both scholars and policy-makers to address this situation. It is against this backdrop that this study intended to find out the opinions, the resources available, and factors informing teachers' views as well as the major challenges teachers face in teaching pupils with visual impairments in their regular classrooms.

1.2 Statement of the problem

Providing pupils with visual impairments with the needed educational services at the appropriate time increases the likelihood that they can participate meaningfully in a variety of aspects of their schooling, including academic, nonacademic, and extracurricular activities. However, per a close observation of the teachers in the inclusive schools, it is unclear the kinds of opinions they hold as far as their teaching of pupils with visual impairments are concerned.

Upon a conversation with some teachers of pupils with visual impairments, it seems some of the teachers in the inclusive schools in the Ada East District of Ghana have some negative opinions towards the teaching of the visually impaired which might not auger well with the teaching and learning process. Again, looking at the way some of the teachers complain about logistics for their jobs as teachers, it appears

there are not enough resources for teaching pupils with visual impairments in inclusive schools in the Ada East district.

The views held by teachers are motivated by several factors. Some could be the level of education, experience level on the job, class size and many more, however it is not known what has influence the opinions of the teachers (whether positive or negative) in the Ada East District towards the teaching of pupils with visual impairment. It was therefore important to find out these opinions in this research.

Furthermore, there is no venture that does not come with challenges. Teachers at all levels encounter several challenges in the pursuance of their duties, yet, it is not known the exact challenges that are being faced by the teachers in the aforementioned district as far as teaching pupils with visual impairments is concerned. It has become very necessary to conduct this study to come with these challenges.

1.3 Purpose of the Study

The purpose of the study was to find out the opinions teachers have towards teaching pupils with visual impairments in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana.

1.4 Objectives of the study

The objectives of the study were to:

1. Examine the opinions of teachers towards teaching pupils with visual impairments in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana.

2. Investigate the factors that influence teacher's opinions towards teaching pupils with visual impairment in some selected inclusive schools in the Ada East District.
3. Find out the resources available for the effective teaching of pupils who are visually impaired in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana.
4. Find out the challenges teachers face in teaching pupils with visual impairments in some selected inclusive schools in the Ada East District.

1.5 Research questions

The following research questions were formulated as a guide to the study;

1. What opinions do teachers have about teaching pupils with visual impairments in inclusive schools?
2. What factors influence teachers' opinions about teaching pupils with visual impairments in inclusive schools?
3. What resources are available for the effective teaching of pupils with visual impairments in inclusive schools?
4. What challenges do teachers face in teaching pupils with visual impairment in inclusive schools?

1.6 Significance of the study

The finding from the study would reveal teachers' opinions on teaching pupils with visual impairments in inclusive settings. This will enable practitioners in education of the visually impaired to adopt strategies that would either improve or mitigate such opinions. The findings would inform stakeholders in the education sector about the opinions teachers have as far as the teaching of pupils who are

visually impaired are concerned. This would help the stakeholders to plan the necessary adjustments on the training of teachers in order that they may have the right opinions on the pupils who are visually impaired in the regular classrooms.

Additionally, the study would reveal the various factors that lead to the individual opinions of teachers of the visually impaired in the various regular schools in the Ada East District. In this way, the government through the initial teacher education institutions would develop their curriculum in such a way that trainee teachers would have the opportunity to interact with pupils with visual impairments at an early stages of their training so they can do away with some negative views they have on the pupils with visual impairments.

Again, it is envisaged that the findings will reveal the resources available for effective teaching of pupils with visual impairments in the inclusive schools. This will help the government and other stakeholders to be aware of the state and nature of resources available for the teaching of pupils with visual impairments in the regular schools in the Ada East District in order that the right quality and quantity of resources would be provided for teachers in the individual schools.

There is no far-sighted venture that does not come with challenges. By this study, the various challenges of teachers who teach pupils with visual impairments in regular settings would be brought to bear which would help in one way or the other to help the government and other stakeholders to provide the needed assistance in solving the challenges identified.

1.7 Delimitation

There were twelve inclusive Basic schools in the Ada East District of the Greater Accra Region; however, the study was delimited to only eight of the schools. This number was selected in order to have a comprehensive result of the study.

Again, in dealing with issues concerning teachers' views in teaching of the visually impaired as far as the opinions of teachers are concerned, there were numerous components that could be investigated such as the experiences, opinions, challenges, financial resources, material resources, and parental attitudes among others. Yet, the scope of this study was delimited to the teachers' opinions towards the teaching of the visually impaired, resources available for teaching of the visually, teachers' skills in teaching pupils who are visually impaired, the factors that influence the opinions of teachers of the visually impaired in the regular settings as well as the challenges that confront teachers of the visually impaired in the regular settings in the Ada East District of Ghana.

Also, although there were several categories of pupils with special educational needs in the schools, the researcher was interested in studying those with visual impairments because they dominated the disability groups in the district.

1.8 Limitations of the Study

This study was concerned with the opinions of teachers about teaching pupils with visual impairments in some selected pilot inclusive schools in the Ada East District of Ghana. In view of its delimitation to a few schools, the study had limited generalizability. However, in spite of the limitations highlighted above, the researcher believed that the results of the study would significantly contribute towards school management.

1.9 Operational definition of terms

Visual impairment: means a person's inability to use vision to do what normal person can use eyesight for without stress**.**

Opinions: a personal belief or judgment that is not founded on proof or certainty.

Inclusive education: means all pupils attending and are welcomed by their age neighborhood schools in age-appropriate, regular classes and are supported to learn, contribute and participate in all aspect of the life of the school.

1.10 Organisation of the study

This study was presented in five (5) chapters. Chapter one presented the introduction which consisted of the background to the study, the statement of the problem and purpose of the study, the scope and limitations of the study, as well as definition of terms. Chapter two entailed the review of related literature. It made use of secondary information such as newspapers, encyclopedia, journals, books and internet blogs related to the research topic whiles the third chapter examined the method used in harvesting data. Chapter four examined the data collection, analysis of findings and discussion of results. Chapter five concluded the study by summarising, concluding, and making recommendations based on the findings. It also covered the implications of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter represents the literature reviewed for the study. The following strands were covered:

- The theoretical framework
- Teachers' opinions towards teaching pupils with visual impairments in inclusive schools?
- Factors influencing teacher's opinion towards the teaching of pupils with visual impairment in inclusive schools.
- Resources for effective inclusion of the visually impaired.
- Challenges teachers face in teaching pupils with visual impairment in inclusive schools
- Summary of literature review.

2.1 Theoretical underpinnings

One key aspect of social research, for example, a qualitative study such as this one, is the theory on which it is based. Theory can be explained in simple term as a set of principles on which an activity is based (Wehmeier, Mclntosh, & Turnbull, 1997). The theoretical traditions and frameworks on which this study is based are that of the Russian psychologist Lev Semyonovich Vygotsky, considered as a pioneer of theories on cognitive development, and the distributive aspect of John Rawls's theory of social justice.

2.1.1 Vygotsky's theory

In his work "Mind in Society" Vygotsky (1978) stated that "human beings come into this world attain consciousness and development throughout their lives in relationship with others" (Vygotsky, 1978 cited in Michalellis, 2010, p. 18). The above citation can be interpreted as we become who we are as a result of our association with others, especially those around us. Connecting this to the research questions which are based on the relationship between sighted students and students with visual impairments, as well as the support given to the latter during lessons, it is quite evident that Vygotsky's assertion as cited above resonates with what the study seeks to find answers.

Vygotsky (1978) argued, among other things, that the mind cannot be understood in isolation of the surroundings, and in this context, the mind represents the student with visual impairments and the surroundings are the kind of relationship, support and encouragement given to that child by those around him or her. According to Vygotsky, someone who has a better understanding or ability level - More Knowledgeable Order (MKO) than the learner in regards to a specific assignment, could assist the learner. The MKO in this context are those who are close to the child, for example the parents, teachers and even peers. In another development, he observed that there is a relationship between development, learning and surroundings that is why he emphasized on the point that children learn through their interactions with the social world; namely, things, objects and people close to them.

Vygotsky (1978) prioritized the connection between people and their sociocultural environment. According to him the environment has a bearing on the cognitive and physical development of the individual. In a further explanation Vygotsky (1978) argues that humans use instruments that develop from a culture,

such as speech, to mediate their social environment. Since the student with visual impairments lacks one of the senses that contribute significantly in a learning situation, possibly resulting in slow speech and concept formation, it is very essential to encourage the child with special needs through the use of cultural tools, for example, the local language when there is the need to help the child in inclusive classrooms. This can be done through peer support and interaction, which possibly will help the child to develop self-help skills needed in many learning situations. Children are vulnerable and thus need help and support as well as require decisions on their best interest by people close to them and government.

Terzi (2010) underscores the importance of people close to children making good choices on their behalf when she stated that, children's status require adults to protect their interests and meet their needs. For instance, children cannot choose not to be educated and cannot choose among educational functioning and capabilities. In this case, the parent or guardian, as well as the state for certain capabilities, exercise the actual choice for the child). It presupposes that children are defenseless and require parental protection in their upbringing and decision making. Good and healthy collaboration between parents and school authorities in a well-functioning education system will therefore be in the best interest of child with visual impairments.

Vygotsky (1978) noted that learning occurs in zones which he called the Zone of Proximal Development (ZPD). According to him this is the length of time it takes a child to perform a given task under his/her peers or adults collaboration. Rodina (2007) reasoned that "through interaction, children can extend their 'internal' limitations and thus exceed their zone of proximal development" (p. 15). This then indicates that interaction helps and support from teachers, parents and peers are required for the child with visual impairments to progress in school. However, one

should be cognizant of the fact that learning takes place in zones and so patience and time is needed for the child to master a given assignment. Again this also means that everyone is unique and thus progresses at a particular pace. Encouragement from people close to the child is vital in this context. To this end Vygotsky (1993) emphasized the importance of social aspects in the upbringing of children with special needs. Vygotsky emphasized that the child "finds the material to build the inner functions which are realized during the process of compensatory [collective] development" (Vygotsky, 1993, p. 127, cited in Rodina, 2007, p. 15). If we become what we are as a result of our association with others and the environment, according to Vygotsky (1978), then it is paramount that these children special needs are assisted in inclusive schools to become useful citizens in their societies and nations at large. The following section discusses Rawls's theory of social justice where I focus on the equal provision of educational resources on the grounds of fairness and equality.

2.1.2 *Rawls's theory*

Educational equality is fundamental to successful inclusive education practice. For instance, Terzi (2010) maintained that "the idea of educational equality is fundamentally grounded in the egalitarian principle that social and institutional arrangement should be designed to give equal consideration to all" (p. 143). Again educational equality is enshrined in EFA policy programme to deal with inequalities in education provision (UNESCO, 1990). Educational equality can be considered as engraved in a theory that views equality in terms of coequal opportunities and on the grounds of fair distribution of resources as a cardinal element of social justice. On the issues of equality, Sen (2009) contends that:

> It is not surprising that equality figures prominently in the contributions of political philosophers who would usually be seen as 'egalitarian', and in American usage as 'liberal', for example John Rawls … What is more significant is that equality is demanded in some basic form even by those who are typically seen as having disputed the case of equality' and expressed scepticism about the central importance of 'distributive justice'. Equality was not only among the foremost revolutionary demands in the eighteenth-century Europe and America; there has also been an extraordinary consensus on its importance in the post-Enlightenment world (p.56)

Thus the demand for equality by the less privileged in society and egalitarians in one way or the other in any sphere of human endeavour sterns down from history and can therefore be seen as prerequisite for a just and unified society. John Rawls's "theory is one of the leading examples of liberal egalitarian theories of justice" (Brighouse, 2001, cited in Terzi, 2010, p. 10). In his book "A Theory of Justice" Rawls (1999) argues that

> Deep inequalities not only are they pervasive, but they affect '[people's]' initial chances in life; … it is these inequalities, presumably inevitable in the basic structures of any society, to which the principles of social justice must in the first instance apply. The justice of a social scheme depends essentially on how fundamental rights and duties are assigned … in the various sectors of society (p. 7).

Inferring from the above quote, Rawls (1999) was not only speaking against differences in societies, but condemns how this will impact negatively on the chances

of survival of the disadvantaged, and in this context, persons with disabilities and the marginalized in our societies. Rawls's theory of justice specifies two rudimentary principles. The first is known as "Liberty Principle" under which everyone has the right to enjoy equal basic liberties, and the second is "social and economic inequalities" (Rawls, 1999, p. 53). The second is in two sections but for the purpose of this study, the second part of the second principle which Rawls (1999, p. 68) referred to as the 'difference principle' will be discussed. According to Rawl, inequalities are only permissible under the precepts of justice. This implies that for differences to exist in societies, it only has to be justified, accepted and allowed only under the umbrella of justice. It is against this framework that the distributive aspect of the theory of justice highlights how educational resources should and must be distributed fairly and equally to all manner of learners irrespective of their physical conditions.

The concept of fairness was explained by Sen (2009) when he stated that, the notion of fairness is taken to be foundational, and is meant to be, in some sense, 'prior' to the development of the principle of justice. It could be argued that there is a good reason to be persuaded by Rawls that the pursuit of justice has to be linked to – and in some sense, derived from –the idea of fairness.

The concept of fairness and just distribution of educational resources and opportunities when offered to persons with special educational needs in an effective functioning education system could turn fortunes of the less privileged around and enhance the process of inclusion. To this end, Terzi (2010) argues among other things that "from the conception of disabilities and special educational needs … necessary and legitimate educational resources have to be devoted to children designated as having disabilities and special educational needs" (pp. 163–164). When persons with

special educational needs are assisted and their resources provided equitably as argued by Rawls, then efforts by the international organizations such as UNESCO and individual nations will go a long way to strengthen and expand the frontiers of inclusive education.

2.2 Teachers' Opinions towards the Teaching Pupils with Visual Impairments in Inclusive School

Teachers of the mainstream education system hold varying opinions as far as the inclusion of children with visual impairments is concerned. Their opinions are mostly either positive or negative. The above strand would therefore be discussed under negative and positive opinions of teachers involved in education of students with visual impairments in the regular classrooms.

An opinion is a point of view that someone holds towards an idea or objects in his or her everyday life. Anyone can have positive or negative opinions toward an object or idea. In any case, to do a given task effectively there is a need to have a positive opinion toward it. According to Websre and Wood (1995) as cited in Tesfaye (2005), for inclusion of learners with visual impairments to be well perceived by individuals with disabilities and those without disabilities, and by the staff who teach them, certain condition including the existence of positive opinions have to be met. Otherwise, as noted by the same source, positive inclusion is unlikely to occur spontaneously in mainstreamed classrooms.

Moreover by emphasizing the impact of opinions on inclusive education Padeliadu and Lampropoulou (1997), noted that 'the effectiveness of any program is dependent on the opinions of the people" taking part in the implementation. This appears true due to the fact that, individuals with positive opinions will be willing to invest their efforts depending on how much they positively value the program and

how they think it is going to be functional. Therefore, positive opinions of individuals with disabilities, non-disabled peers, teachers and administrators contribute to successful inclusion of children with visual impairments.

Previous research outcomes, in the area of inclusive education suggest that opinions play a key role in achieving successful social interaction among teachers and students and win their attention in favor of the required educational modality. According to Padeliadu and Lampropoulou (2007), one of the major arguments that have often been used in the debate about inclusion of students with special needs has been the opinions of teachers toward inclusion of learners with special needs. It further pointed out that teacher opinions have been considered as one of the major factors guaranteeing the success of inclusion of students with special needs. These studies also suggested that opinions towards inclusion are strongly influenced by the nature of the disabilities and educational problems being presented and, to a lesser extent, by the professional background.

Jobe, Rust and Brissie (2016), through empirical research on teachers' opinions and inclusion, concluded that teachers' opinion plays a vital role in the success of any program in education, especially the practice of inclusion. Jobe, et al. noted that few studies have been done to judge how teachers truly feel about inclusion. The opinions and beliefs of general education teachers toward inclusive practices may influence school learning environments and equal learning opportunities for students with disabilities (Scruggs & Mastropieri, 2006).

The vast majority of researches on teachers' opinions have indicated that many general education teachers philosophically support inclusion, but many have concerns about their innate ability (self-efficacy) to implement these programs successfully (Beull, Hallam, Gamel-McCormick, & Scheer, 1999; Van Reusen,

2000). Scruggs and Mastropieri (2006) conducted a research synthesis of empirical studies concerning the opinions of educators toward inclusion. The synthesis of literature covered over 30 years of research on teacher opinions and the inclusion construct. The intent of the synthesis was to provide important information about where the field of education is headed in respect to the educational policy.

The data set, which focused on teachers' opinions toward mainstreaming (inclusion), involving students with visual impairments included 10,560 teachers, along with other school personnel, from all geographical locations of the United States and parts of New South Wales, Australia; and Montreal, Canada. These educators had been surveyed to gather their opinions about relevant topics relating to inclusion. Topics covered the common issues such as adequacy of training, resources, and support, etc. Participants, who included demographic information as part of their responses, totaled 1,173 special education teachers and 6,459 general education teachers. Years of teaching experience ranged from 0-31. Educational backgrounds revealed that 987 respondents had bachelor's degrees, 741 respondents had master's degrees, 2 respondents had educational specialist's degrees and one respondent had a doctorate.

Some respondents failed to address the demographic part of the surveys. Return rates for the surveys ranged from 48% to 95% with a mean average of 72% and a standard deviation of 16% for the eleven survey reports used to generate this data. Reliability of the instrument used revealed between 0.52 and 0.92 for a mean 0.79 and a standard deviation of 0.12. The reliability was based on ten reports. The findings from the study revealed that 10, 560 teachers had been surveyed through 28 different survey reports. The wide variety in surveys, procedures, time and

geographical locations surveyed apparently had no negative effect on responses for the different items.

The majority of teachers surveyed believed in mainstreaming/inclusion construct, while a slight majority was only willing to implement the construct in their classrooms. Minority of teachers believed that students with visual impairments would be too disruptive for the regular classroom and would demand too much attention. Overall, support for inclusion correlated with the degree of inclusion implemented and the severity of the student's disability.

Another relevant finding in the research concluded that one-fourth to one-third of educators surveyed agreed that they had sufficient time training, material/personnel resources to have a successful inclusion program. Some of the respondents tended to become more positive in their opinions after they had received necessary training needed to teach in the inclusive classroom setting. Scruggs and Mastropieri (1996) noted that educators should be cautious with these findings because, as with any research, studies with inclusion and teacher opinions maybe inconsistent.

Through a synthesis of research, Scruggs and Mastropieri (2006) noted that after 30 years, teacher opinions toward inclusion of learners who are visually impaired had changed very little. The findings showed that almost all the educators thought that inclusion was beneficial to students. The amount of time the students with special needs spent in the regular classroom tended to reduce these percentages. Scruggs and Mastropieri (2006) concluded that many educators saw inclusion as a valuable and beneficial practice. They cautioned that positive teacher opinions are important for inclusion to work at any level.

The most recurring theme in empirical studies involving inclusion is lack of professional training and development to work with disabled students in the inclusive

classroom setting (Scruggs & Mastropieri, 2006). Van Reusen, Shoho, and Barker (2010) postulated that opinions and beliefs of general education teachers toward inclusion of the visually impaired are learned and appear to be influenced by the amount of training and knowledge the individual teacher has in regards to teaching disabled students. Some studies have concluded that positive teacher opinions and heightened self-efficacy, along with proper training is directly related to general educators being successful in the inclusive classroom (Salend, 2014).

There is a body of literature on teachers' perceptions, opinions and beliefs on inclusion of children with visual impairments. Chambers and Forlin (2010) defined perception as a learned, evaluative response about an object or an issue and a cumulative result of personal beliefs. Forlin added that beliefs influenced teacher opinions to inclusive education that in turn, influence their intentions and behaviors. Perceptions are formed by experience as well as by implicit learning and may reflect an individual's personality (Zimbardo & Lieppe, 2011). Johnson and Howell (2009) contended that perceptions and opinions may be seen to have three related components: cognitive (the idea or assumptions upon which the perception or opinions is based), affective (feelings about the issue), and behavioural (a predisposition toward an action that corresponds with the assumption or belief). As a result, the formation and modification of teacher opinions are important areas of education research (Weisman & Garza, 2002).

In the last decade, Johnsen and Skjorten (2001) observed that many changes had taken place in the field of educating persons with special needs and other marginalized groups in the society. They noted that what brought about these changes were a result of the acknowledgement and understanding of diversity. In a further explanation, Johnsen and Skjorten mentioned that the changes include awareness

creation, opinions, methodology, access and availability and use of related concepts. Opinions towards inclusive education vary among individuals, communities and nations. Reynolds and Fletcher-Janzen (2004) consider opinions as learned beliefs that develop over time, and from experiences with others which has to do with the individual's intuitive understanding, construction and way of reacting towards an idea or a concept and in this context inclusion of the visually impaired.

Internationally, the Salamanca Statement and Framework of Action on Special Needs (UNESCO, 1994) emphasized the need for the education of all children. Even though, there are international and national efforts in fighting for the right of persons with disabilities, for example, to be enrolled in schools, highlights of the EFA Global Monitoring Report (2010) paints a worrisome picture of the state of the situation when it revealed that there are an estimated 150 million children in the world with disabilities, about four-fifths of them in developing countries. Millions more live with disabled parents or relatives. Beyond their immediate health-related effects, physical and mental impairments carry a stigma that often leads to exclusion from society and school. Children with impairment that effect the capacity to communicate, and more severe impairments overall, typically have the most limited opportunities for education, especially in the poorest countries (UNESCO, 2010).

Teachers' opinions can be made apparent to all students through their actions and interactions with individuals in the classroom. Typically, teachers tend to provide more positive feedback to higher achieving students and also tend to have higher expectations for these students as well. Students who are considered lower achieving tend to have less contact with the general education teachers all together, and what little contact they do have is usually not positive (Johnson, 2011).

Leyser and Tappendorf's (2001) study took a closer look at teachers' opinions towards inclusion based on numbers of classes taken. Specifically, Leyser and Tappendorf looked at teachers' opinions who had taken 3-6 courses, 1-2 courses, and no courses. The results of their study indicated it was those teachers who had taken 3-6 (or more) courses that had significantly more positive opinions than those who had taken 1-2 (or no) courses. Surprisingly, their study also indicated there was no significant difference in opinions between those who had taken 1-2 courses and no courses. If these results are applicable, then "it seems that completing a requirement to enroll mainly in one course on exceptional children which generally covers introductory content (e.g. characteristics, some assessment, teaching strategies, and the law), does not prepare participants and develop the necessary mainstreaming instructional skills" (p. 758). If one course does not provide teachers with the necessary skills, then the trend requiring a single college course on working with students with special needs is virtually useless.

An additional study conducted by Pernell, McIntyre and Bader (2001) had somewhat similar findings. In this particular study, the focus was on how teachers' opinions towards inclusion progressed through the completion of a course on working with students with special needs. The study looked at general education teachers' opinions towards inclusion at various points throughout the course. As expected, general education teachers' initial opinions towards inclusion ranged from negative to neutral. Some teachers with negative opinions had feelings that the special education teachers wanted them to share in their trouble, which is why they felt students with special needs were in their classrooms. As the training course progressed, teachers' opinions towards including students with special needs in their classrooms became more positive.

Cook (2002) noted the need for positive teacher opinions and for teachers to create a 'sense of belonging' to support effective inclusive practice. In relation to the assertion of Cooks, Silverman (2007) pointed out that, teachers' opinions and beliefs directly affect their behaviour with students and so have a great influence on classroom climate and student outcomes.

Van Reusen, Shoho and Barker (2010) concluded that teachers who feel less positive towards the idea of inclusion will not implement effective instructional strategies as often as teachers with positive opinions. Another study carried out by Opdal, et al. (2001) in Palestine on teachers opinions indicated that 60% of the teachers who participated in the study were positive about the inclusion of learners with special needs into regular schools with those with physical disabilities, visual impairments and hearing impairments more includable than those with behavioral problems and learning difficulties in specific areas such as reading and writing difficulties. Factors such as nature and severity of disability, teachers' experience and their beliefs about the power of teaching, professional training of teachers, number of subjects taught, gender of the teachers and characteristics of the schools influenced the teacher's perspectives towards inclusion of children with disabilities.

Again, Wilezenski (2012), cited in Booth and Ainscow (2008) conducted a study in Australia on teacher's opinions towards inclusive education. Wilezenski found out that the teachers were more positive about students whose programmes focused on social inclusion than those requiring physical changes in their school or classroom. The teachers were also more accepting to students with physical disabilities than to those who necessitated academic modifications. The researcher then concluded that such research findings indicate that the type of disability, and the

demands it eventually makes on a teacher, will influence teacher opinions towards including a child with such a disability in a regular class.

Another study carried out in America on teachers' opinions towards inclusion indicated that teachers who were not participating in inclusion programmes had strong negative feelings about inclusion of learners with blindness, and they felt the decision makers were out of touch with classroom realities. Class size, inadequate resources, teacher's opinions towards persons with disabilities, severity of the disability and lack of adequate preparation would affect the success of inclusion (Vaughn, Schumm, Jallad, Slushar, & Saumell, 2016). Notwithstanding, another study carried in Uganda indicated that school administrators were positive in including children with visual impairments into regular classrooms, although most parents seemed to have preferred having their children in the boarding sections where the conditions were favorable than the regular school where they commute from their homes (Alenyo, 2011).

In order for inclusion of learners with blindness to work in practice, teachers and principals in regular schools must accept its philosophies and demands. According to Salend and Duhaney (2009), in their review of studies -largely American - educators have varying opinions towards inclusion of learners with blindness, their responses being shaped by a range of variables such as their success in implementing inclusion, student characteristics, training and levels of support. Some studies reported positive outcomes for general teachers, including increased skills in meeting the needs of all their students and developing an increased confidence in their teaching ability. According to the authors, negative outcomes included the fear that the education of non-disabled children might suffer and the lack of funds to support instructional needs. For special educators, the benefits included an

increased feeling of being an integral part of the school community and the opportunity to work with students without disabilities.

Similarly positive opinions towards inclusion were reported by Scruggs and Mastropieri (2006). About two-thirds of the US teachers they surveyed supported the concept of mainstreaming/inclusion. A smaller majority were prepared to include students with disabilities in their own classes, their opinions depending on the type and severity of the disability. Only one-third believed they had sufficient time, skills or resources necessary for inclusion, especially for students with total blindness. In their study of Canadian teachers' and principals' beliefs about inclusion of with blindness and the low vision, Stanovich and Jordan (2008) found two strong predictors of effective teaching behaviours in inclusive classrooms. The strongest one was the 'subjective school norm' as operationalised by the principal's opinions toward heterogeneous classrooms. The second major predictor was an 'interventionist school norm', a measure derived from a scale ranging from the idea that problems exist within students ('pathognomonic'), at one end, to the idea that problems result from the interaction between the student and their learning environments ('interventionist'), at the other end.

Positive opinions and perceptions combine to play a major part in supporting diversity in inclusive education (Booth & Ainscow, 2002, Silva & Morgado, 2004). According to Cook (2002), training in special and inclusive education has consistently been found out to have influenced educators' opinions either in a single course or through a content-infused approach. Also, Lancaster and Bain (2007) agreed that, in general, there is a positive change in opinions after undertaking an inclusive and special education unit of study and this is the case across a number of contexts and countries. They suggested that some type of formalized input is sufficient to increase

the awareness of general education pre-service teachers. However, Molina (2006) found some research evidence to demonstrate that theoretical classes and reading are not sufficient to modify teachers' and students' negative opinions towards students with special educational needs.

Boling (2007) contended that if pre-service teachers are going to develop positive opinions 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. Boling further suggested that teacher educators should use case methodology to encourage individuals to reflect upon and possibly change their prior assumptions and beliefs.

Johnson and Howell (2009) also showed that opinions are amenable to change through a course and an assignment that involve the analysis of case studies in inclusive education. Similarly, Elhoweris and Alsheikh (2006) suggested that opinions can be improved by increasing teachers' knowledge about learners with disabilities and ways to meet their learning needs and suggested that teacher education programmes may need to include more alternative learning styles and instructional strategies. They proposed the use of successful inclusive teachers and individuals with disabilities as guest speakers (Salend, 2011) and the use of disability simulation. Lambe (2007) also found out that successful teaching practice in the non-selective sector had the most positive influence on perceived competency and on general opinions towards inclusion.

Boling (2007) highlighted on the need for teacher educators to ensure that their interactions with teacher candidates do not give the impression that there is one 'proper' way to think about inclusion. They need to build trust and encourage students

to challenge prior assumptions and beliefs. Similarly, Kumashiro (2010) also noted that teacher candidates must not be led to believe that there is a single answer, or a single strategy, for supporting students and need to understand that no single model of education can ever truly make a classroom inclusion the best. Mintz (2007) suggested that beliefs, opinions and values are not easily dealt with in large lectures and require small group seminars and discussion.

Silverman (2007) found that some pre-service teachers believe teaching to be a mere set of discrete skills learned in a straightforward way and that teachers would be adequately prepared to teach once told what to do. He suggested that teacher educators should implement training approaches that will build beliefs in gradual, 'effortful' learning, that make clear the benefits of inclusion for all students.

In acknowledging individuality in education, teachers should become aware of the fact that personal experiences and history shape a teacher's own learning processes and the way they see their school and their professional future (Casanova, 2006). Similarly, the General Teaching Council in England (2008) noted the following beliefs that impact on teachers' ability to promote pupil learning:

- Whether a pupil's ability to learn is fixed or can be changed
- Whether learners benefit more from working with others or from working individually
- Appropriate ways to respond to learners' mistakes and how this might encourage or discourage them from taking risks; and
- The promotion of positive beliefs amongst pupils.

They say that teachers' beliefs can be changed through action research, by coaching and by analyzing video footage of their own teaching. NCATE (2012) defined dispositions as 'values, commitments and professional ethics that influence behavior

towards students, families, colleagues and communities and affect student learning, motivation and development as well as educators own professional growth' (p. 53). Usher (2012) suggest four dispositions towards effective inclusive education.

These dispositions are (1) empathy; (2) a positive view of others; (3) a positive view of self; (4) and authentic and meaningful purpose and vision. Avramidis and Norwich (2002) noted the importance of positive opinions of beginning teachers in inclusive settings has been well documented. However, both pre-service and in-service courses that address the skills and the opinions of teachers towards students with disabilities are frequently deemed insufficient by teachers (Westwood & Graham, 2003).

Finally, inclusive education can be achieved depending on teachers' positive opinions and beliefs towards teaching disabled children without exhibiting certain stereotypical patterns in students' academic behaviour (Jondan, et al., 2011). In other words, teachers stereotypical and self-imposed perceptions of considering their pupils as one good or bad from the others closes their own motivation to be adaptable to each of their pupils' needs (Prater, 2010).

The success of inclusive programs may be at risk if regular classroom teachers hold negative perceptions toward the inclusion of students with disabilities (Van Reusenet et al., 2001). Negative perceptions of inclusive education may become obstacles, as general education teachers attempt to include students with disabilities (Cawley, Hayden, Cade, & Baker-Kroczynski, 2002). The most salient trend in education involving individuals with disabilities is that of inclusion. Teachers are regarded as a key component in the educational system. However, instruction in the general education classroom is impeded based on the individuals being taught.

Studies in Ethiopia, like, Tibebu (1995), Abate (2001) and Tilahun (1991) as cited in Tesfaye (2005), which are small-scale studies (survey-likert type scale), indicate that the majority of teachers, who were participating in inclusive programs, had strong negative feelings about inclusion. The teachers identified several factors that would affect the success of inclusion, such as class size, inadequate resources, lack of adapted curriculum and lack of adequate training.

According to Olson, Chalmers, and Hoover (2007) and Kavale and Forness (2010), secondary educators often differ on their generic opinions toward inclusion and making necessary adaptations. Many perceive making needed adaptations as barriers to inclusion, while others accept responsibility for disabled students in their classrooms. Olson et al., also noted that the academic success of students with disabilities in the regular classroom is related to the extent where teachers are willing to make necessary adaptations for these students (Lago-Delello, 2008).

Accordingly, Hover and Yeager (2013) conducted a study on teacher opinions and making adaptation for students with disabilities in the regular classroom. This study, along with studies by Schumm and Vaughn (2013) and Zigmond and Baker (2015), questioned whether or not students with disabilities can be successful in the regular classroom with adaptations. Hover and Year (2003) noted that students with disabilities in the regular classroom require meaningful curricular and instructional adaptations and accommodations in order to be successful. It is suggested that the success of students with disabilities requires teachers to differentiate curriculum, model learning processes, and present materials in multiple ways. To do this, teachers have to plan and establish goals for the varied abilities in the classroom.

The report among other things noted that the education system and classroom experience can play a role in counteracting institutionalized discrimination,

stigmatization and neglect within the classroom, the local community and the home (UNESCO, 2010). It can be argued by way of inference from the above account that negative perceptions around the world towards persons with disabilities has been a barrier to inclusion and is thwarting international efforts in the provision of inclusive education. Whilst efforts are being made internationally, nationally and locally towards practical inclusion, Johnsen and Skjørten (2001) mentioned that "throughout the ages individuals and groups who are different were and still are rejected by the society in all countries" (p. 23). The above quote buttresses the negative opinions that society still has when dealing with persons who are physically challenge in one way or the other. Johnsen and Skjørten further observed that "still in many countries only 50-60% of children without impairment and 2-3% of children of impairment are in school" (p. 28).

Again, we can see from the quote of Johnsen and Skjørten (2001) that though there have been some notable changes over the years shifting from segregation towards inclusion of individuals and groups who are different in one way or the other in our societies, attitudinal change for full acceptance and inclusion still remains a big challenge. Differences in perception and opinions towards inclusive education, as well as difficulties in embracing inclusion, were noted by the highlights of the EFA Global Monitoring Reports (2010). The report states that from the extract above it is obvious that disparities and barriers still exist to the extent that the school one attends is based on parental income and family backgrounds. This then means that children from poor family backgrounds and some linguistic or ethnic affiliations will not be able to attend certain schools in some communities due to societal opinions. Inequalities in education systems in some developing countries, marked by large variations across schools in terms of class size, availability of books, quality teachers and dilapidated

school buildings as captured in the above quote are notable hindrances towards inclusive education.

In a different perspective, unfriendly infrastructural designs in many schools in developing countries tend to compound easy access for learners with special needs in inclusive schools. This assertion, Ocloo, et al., (2002) concur with when they commented that architectural barriers, erection of staircases instead of ramps for wheelchair users, and absence of and malfunctioning elevators pose a lot of challenges to students with disabilities in their effort to using most of the existing structures in the schools. Moving away from difficulties in relation to accessibility by persons with disabilities lie inequalities, discrimination and stigmatization along language and ethnic affiliations, and these can further disadvantage students with special needs.

Highlights of the EFA Global Monitoring Report (2010) recognized among other things certain areas to focus on to make inclusion more holistic. In the report it was mentioned that "failure to address inequalities, stigmatization and discrimination linked to wealth, gender, ethnicity, language, location and disability is holding back the progress towards Education For All" (UNESCO, 2010, p. 5). The meaning underlying the above quote can be explained as if differences within societies are not addressed along the lines mentioned in the above quote for example; discrimination along ethnic and language affiliations then efforts towards inclusive education will be a mirage.

In another development, Avoke, et al. (1998) asserted that opinions towards persons with disabilities have not changed considerably since pre-Christian times. It is therefore not uncommon when people with physical disabilities are discriminated against in their job placement. Reiterating further, Avoke, et al., observed that

opinions towards work capabilities of people with physical disabilitieshave been very dismal such that employers are frequently suspicious of the work ethics of these persons. In spite of what many of them are capable of doing, the streets have become their safe haven. Within inclusive schools, teachers can play a vital role as they are seen as the final implementers of whatever policy or programmes that is/are being put into operation in the schools. Students who have been identified as having specific learning disabilities, mild intellectual disabilities, and emotional disturbance, are those typically shown to significantly benefit from inclusion (Johnson, 2001). Unfortunately, the amount of success students with special needs can have from inclusion heavily relies on general education teachers' opinions towards them (Weisel & Tur-Kaspa, 2002). Not only do general education teachers' opinions affect the success of students with special needs, but

> … research is available which implies that teachers' opinions can have a detrimental effect on handicapped students' psychological and educational adjustment to the regular classroom. (Johnson, 2001)

In comparison to elementary school teachers, who have more positive opinions towards inclusion, high school teachers tend to have more negative opinions towards including students with special needs into their classrooms. A study conducted by Zigmond, Levin, and Laurie (2005), which consisted partially of a survey of opinions of mainstream high school teachers, indicated secondary teachers were tolerant of the thought of placing students with special needs in their classrooms, but ultimately would prefer not to include them. This preference is due in large part to the set-up of high schools in general, which normally consists of a large number of students within teachers' classrooms.

General education teachers' lack of training in working with students who are blind is not only a disadvantage to these students in the sense they are not given the opportunity to demonstrate their full potential, but it is also a disadvantage to them in the sense the amount of training a general education teacher has, has been linked to general education teachers' overall opinions towards working with students with special needs.

As mentioned above, general education teachers' opinions have been shown to have an effect on students' with special needs success in general education classrooms. In a study conducted by Van Reusen, et al.,(2011), results indicated that teachers' opinions about inclusion were related to their special education training and their experience with working with students with special needs. In this study, over half of the teachers surveyed obtained negative scores about educating students with special needs in their classrooms. Specifically, the teachers with the most negative opinions were the ones who had the least amount of training and experience with working with students with special needs.

The teachers with more negative opinions expressed their concern with the impact students with special needs would have on their classroom environment, their ability to instruct, and the overall quality of learning. A similar study, conducted by Bender, Vail, and Scott (2005), mentioned earlier, had similar findings to Van Reusen et al. (2011) study, in that general education teachers' opinions towards mainstreaming correlated with the number of courses taken on working with students with special needs. Specifically, they found the more courses teachers had on working with students with special needs, the more positive their opinions (Bender, et al.).

Similar to training, teachers' opinions towards working with students with special needs who are blind have been shown to correlate with the amount of teaching

experience a teacher has. In some sense, years of experience can be linked to training. As mentioned earlier, only one course on educating students with special needs is required in college to obtain a teaching license. Because this requirement is only 12-15 years old, teachers who have taught less than 15 years have been exposed to such courses. This makes those educators who have longer teaching experience less likely to have taken any courses on working with students with special needs. Therefore, those with more teaching experience and less training are those who are more likely to have negative opinions towards working with students with special needs. A study conducted by Hastings and Oakford (2003) revealed that teachers with more teaching experience did in fact have more negative opinions towards inclusion than those who had less teaching experience. While there is not a great deal of literature that indicates general education teachers with more teaching experience have more negative opinions about having students with special needs included in their classroom, the literature reviewed here allows one to hypothesize this statement would be true.

Teachers' opinions are related to their opinions, feelings, beliefs and perceptions towards inclusion of children who were blind in particular into the mainstream. A study carried out by Mushoriwa (2008) on the opinions of primary school teachers in Harare towards the inclusion of blind children in regular classes showed that although regular teachers understood the problem associated with blindness, 58.25% did not make appropriate educational provisions for blind children in the regular classrooms because of heavy workload and lack of resources. The majority of teachers 94% indicated that they were not prepared to teach them. These children were seen as a burden and as interfering with the normal flow and routines of regular class activities.

With the introduction of Universal Primary Education (UPE), teachers are now expected to teach all children including those with special needs in the same classes or environment. However, on the researcher's personal experience as a teacher, the concept of inclusion has been introduced when a huge number of teachers are not trained in special needs education, inadequate specialized learning and teaching materials and high teacher-pupil ratio of one teacher per class of about 80 pupils. For instance, in Moroto district in Uganda 20.7% of regular teachers are trained. Some schools in the rural areas are handled by one teacher against two or three classes. 15 (3.5%) teachers are trained in special needs education. It is difficult to attract teachers from other districts due to hardening conditions in the rural schools such as lack of teachers' accommodation. Teachers have to walk at least 10 kilometers to and from school daily. Insecurity is another hardship in the district. (Abul, 2006).

With such conditions coupled with the feelings of the indigenous towards formal education, it is with a high likelihood of the primary school teacher to have negative opinions about the inclusion of children who are blind in the mainstream schools. MOES (2011) argues that many learners enrolled in special schools could instead have benefited more effectively from inclusive setting. Ordinary teachers in Moroto district seem to perceive education of children with special needs as additional burden on their teaching responsibilities. For instance, it is always common to hear some of them say that: "These children must be taken to their unit where their teachers get something little. After all, some of them do not cope with standards in ordinary schools. It is a real bother..." Such perception among teachers working in inclusive setting is dependent on the differing background and perceived roles of a teacher (Guralnick, 2010).

Children who are blind are either left out or forced out of the school system due to various reasons. These reasons include: The traditional methods teachers use for teaching and learning; poor opinions towards the learners with Special Needs by the peers, school administrators and other stakeholders (MOES, 2003). Besides this, education is not considered a priority by the indigenes of the area.

As mentioned earlier, numerous studies have involved teachers' opinions towards inclusion and the results vary. However, it is possible to say that the majority of the teachers surveyed had strong negative feelings about inclusion. Leyser, Kapperman and Keller (1994), cited by Mohammed (2006), conducted a crosscultural study of teachers' opinions towards integration in the USA, Germany, Israel, Ghana, Taiwan and the Philippines. Their findings showed that there were differences in opinions toward integration/inclusion among these countries. Teachers in the USA and Germany had the most positive opinions. Teachers' opinions were significantly less positive in Ghana, Philippines, Israel and Taiwan. The reason could probably be due to limited or nonexistent training to acquire inclusion competencies; the limited opportunities for inclusion in some of these countries, limited teaching experiences, limited experience with students with special education needs and lack of Laws requiring inclusion.

2.3 Factors Influencing Teachers' Opinions towards the Teaching of Pupils with Visual Impairment in Inclusive Settings

Several factors contribute to the reasons why teachers have several opinions and opinions towards children with visual impairments in their regular classrooms. Some of the factors that have been identified by various researchers and scholars include but not limited to*:* training regarding teaching pupils with a disability, Gender, Age, teaching experience and teachers' qualifications, Class size, Level of confidence,

Previous experiences in teaching pupils with disabilities, The severity of a pupil's disability, and Support from administrative staff.

2.3.1 *Training regarding the teaching of pupils with visual impairments*

The amount of training received by teachers has been cited by many as a leading cause of teachers varying opinions in accepting pupils with visual problems in their classrooms. It is noted that teachers may resist inclusive practices on account of inadequate training (Heiman, 2011). According to Heiman, it would appear that teachers perceive themselves as unprepared for including pupils with visual impairments in education because they lack appropriate training in this area. Inadequate training relating to inclusive education may result in lowered teacher confidence as they plan to include pupils with visual impairments (Whitworth, 2011).

Teachers who have not undertaken training regarding the inclusion of pupils with visual impairment, may exhibit negative opinions toward such inclusion (Van Reusen, 2011), while increased training was associated with more positive opinions toward the inclusion of pupils with visual impairment. Training in the field of special education appears to enhance understanding and improve opinions regarding education of pupils with visual impairments in the regular settings. According to Beattie (2007), introductory courses offered through teacher preparation programs may sometimes be inadequate in preparing the general educator for successful inclusion of pupils with visual impairments.

The confidence level of the regular classroom teacher is worth mentioning when it comes to the willingness and competency levels of teachers. Sigafoos and Elkins (2014) concluded that mainstream educators generally lacked confidence as they attempted to include pupils with visual impairments into their classes. Sigafoos and Elkins concluded that this may be as a result of lacking proficiency about

modifying the regular education curriculum to suit pupils with individual learning needs.

Further, Avramidis (2010) supports the view that teachers, who perceive themselves as competent inclusive educators, often have more positive opinions toward inclusive education. Teachers acquire increased competence as a result of increased training in the field of inclusive education. Avramidis pointed out that inadequate knowledge with regard to instructional techniques and curricular adaptations, which contribute to decreased confidence, may be factors which influence a teacher's opinions toward inclusion of pupils with visual impairments.

2.3.2 *Teaching experience*

There have been several attempts in investigating whether there is any significant correlation between a teacher's age, years of experience and qualification to that teacher's opinions toward the inclusion of pupils with disabilities into regular classrooms. Some studies record that older teachers appear to foster less positive opinions towards including pupils with visual impairments than younger teachers (Cornoldi, 2008; Lampropoulou & Padelliadu, 2007). According to these scholars, younger teachers appear more accepting of pupils with visual impairments in inclusive trends than their more experienced counterparts. It would also seem that the most experienced educators have the lowest level of acceptance of inclusion of pupils with visual impairments in the regular setting. Further to this, Whiting and Young (2015) are of the view that older, more experienced teachers are uncomfortable with inclusive practices, because they face an intrusion into their rooms by support personnel. The presence of other adults in the room may result in tension and discomfort especially as they perceived the visitor as an observer and not as additional support (Whiting & Young, 2015).

Possessing previous experience as an inclusive educator appears to positively predispose teachers toward inclusion of pupils with visual impairments. According to Avramidis (2010), it would appear that previous experience in this field, allows mainstream teachers to feel more comfortable within the including pupils with visual impairments in the regular classroom. Avramidis adds that direct experiences of including pupils with visual impairments into mainstream settings appeared to be an essential factor in shaping teachers' opinions toward inclusive settings (Heiman, 2011) concluded that a teacher's level of educational qualification did not significantly influence that teacher's opinions toward the inclusion of pupils with visual impairments into regular classes, while the study by Stoler (2012), indicated that teachers with high levels of education had less positive opinions toward inclusion, than those who did not achieve master's degree status.

2.3.3 *Class size*

Class size has been noted by several scholars as one of the big influences to the opinions of teachers towards pupils who are visually impaired in the inclusive settings worldwide. Large classes may be viewed as an obstacle to the successful implementation of inclusive education (Agran, Alper, & Wehmeyer, 2012). According to Agran et al., larger classes place additional demands on the regular educator, while reinforcing concern that all pupils may not receive proper time or attention.

Cornoldi (2008) make reference to Italian Law 517, which refers to the inclusion of pupils with disabilities into regular classes. Cornoldi further mentioned that class sizes cannot exceed 20 if there is one pupil with a disability in a mainstream class. According to this author, consistency in terms of class size has allowed Italian teachers to be more supportive of inclusive education.

2.3.4 *Support from administrative staffs*

Administrative support has also been cited as a significant factor in determining teacher opinions toward inclusion involving pupils with visual impairments, as the teacher feels reaffirmed if the school principal fosters a positive learning environment for both teachers and pupils (Idol, 2014) according to Idol, teachers believe that the support of the principal and other school leaders are critical in order for them to implement inclusive practices. Hammond and Ingalls (2013) refer to a "visionary" principal, who will accept the challenge to create an inclusive environment for all pupils. Principals need to accept ownership of all pupils and support inclusive placement, in order to inspire these feelings among other school personnel. However, research suggests that administrators' opinions toward pupils with disabilities are less than positive; thereby impacting on the process of inclusion in schools (Daane, 2010).

Clayton (2016) noted that some administrative staffs lack sufficient understanding and expertise regarding the delivery of services to pupils with visual impairments. Further research commented that administrators may hold positive views of inclusion as they are further away than mainstream teachers, in terms of actual experiences.

2.4 Resources for Effective Inclusion of the Visually Impaired

There are many kinds of resources that are used to enhance effective inclusion of the visually impaired in mainstream schools.

2.4.1 Assistive device or technology

Any adaptive device or service that increases participation, achievement or independence for a pupil with a disability may be considered assistive technology

(AT) (Avoke, et al., 1998). According to the authors, assistive technology helps pupils who are visually impaired (with and without additional disabilities) increase their access to the general curriculum and improve their academic performance. It is important to thoughtfully consider what devices, tools and technologies will be appropriate to meet the pupil's individual and unique learning needs. AT devices should not give pupils an unfair advantage, but instead, should provide them with the independence to compete effectively with peers.

Similarly, Befring and Tangen (2008) have it that assistive devices can level the playing field, so to speak, for pupils with visual impairments and can be a great equalizer. Pupils who are blind or have low vision need to acquire a range of technology skills that will give them options for gathering and conveying information. Instruction in the use and maintenance of Assistive Technology is needed in the curriculum for pupils with visual impairments. According to them, assistive technology enables blind and visually impaired pupils to access and store information from libraries around the world and the Internet. In addition, pupils with visual impairments can use assistive technology for note taking, studying for tests, research and a variety of other academic uses.

2.4.2 Screen access software

Screen access software is another set of software that is used to teach the persons who are visually impaired in both the general education and the inclusive education classrooms. In the same vein, Carrington, Deppeler, and Moss (2010) contend that in order to gain full and independent access to the personal computer, a pupil with visual impairments must have a screen access program installed on the computer. The screen access program provides spoken, synthesized speech, output, using the personal computer's soundboard and loudspeakers or headphones. As the

individual enters data on the keyboard or navigates the Windows operating system or a program the screen access program announces the text, which is displayed on the screen. In addition to reading the literal text, the program provides important contextual information, which is necessary to navigate. For example, pressing the "Start" key will result in "Start, Menu" spoken by the screen access program. This tells the user that the word "start" is highlighted and that the computer has displayed a menu. A menu is navigated with the up and down arrow keys only. Pressing other keys will result in either nothing being announced, or performing an unintentional function (Gay, Mills & Airasian, 2009).

2.4.3 *The braille embosser*

The braille embosser can also be used to promote effective learning among pupils are visually impaired**.** A Braille embosser, also referred to as a Braille printer, is a piece of very specialized computer hardware. According to Corporate Profile of New Times Corporation (2012), the embosser allows Braille files that have been created on the personal computer to be produced in hard copy for the pupils to read.

The fastest Braille embosser available cannot produce even one dot of material unless a Braille translation program is installed on the computer. Denzin and Lincoln (2011) pointed out that as with screen access programs, two titles are most prevalent today, the Duxbury Braille Translator and MegaDots. The author observed that the Duxbury Braille Translator is a Windows program. As such, it will remind you of a word processor or the WordPad feature of Windows. As with a word processor, you can enter text directly from the keyboard, creating your own documents for Braille production as you would create a new document for print reproduction. According to the author, you can also import files from existing sources, again as with a word processor. The range of files that can be imported is quite wide and includes common

formats such as Microsoft Word, ASCII text, WordPerfect, and HTML (Web pages). Some important file formats are not supported directly, most significantly PDF files.

According to Gall, Gall and Borg (2009), MegaDots is a program that operates in a DOS window on a personal computer. It is particularly popular among transcribers who are intimately familiar with the Braille code and the rules of Braille formatting. Transcribers are among the most important members of the team of educational professionals because they bring properly formatted Braille materials to your child. The authors add that once the file is entered from the keyboard or imported, the unique properties of DBT and MegaDots reveal themselves. With the click of a mouse or a simple key press, the file is translated into contracted Braille. Only a translated file can be sent to the embosser for output in hard copy. However, the author pointed out that significant limitations exist in the arena of automatic conversion of files and some knowledge of formatting is required when creating original files in DBT or MegaDots. According to the authors, because most imported documents will suffer the effects of conversion from one format to another, or will not have the necessary mark-up or styles required for proper Braille formatting, intervention by a skilled human is often required.

Gyimah and Vanderpure (2009) proposed that it is important to point out that children with visual impairments just like sighted children learn about the proper formatting of materials just by observing the format of the textbooks and handouts prepared for them by their teachers. Long before anyone teaches it, children learn about headers, indenting, italicized characters, etc. The advent of computerized Braille production is an enormously important development in making more Braille available at the same time as print is available. However, poorly or improperly formatted Braille produced by adults inexperienced with Braille, will give children

with visual impairments wrong or conflicting information about formatting. In other words, despite the advances in technology, the human element in Braille production is still important.

2.4.4 *Notetakers*

There is the urgent need for every inclusive setting with presence of the pupils with visual impairments to have notetakers**.** Perhaps no single piece of specialized technology intended for use by pupils with visual impairments attracts more attention than notetakers, also called Braille notetakers. According to Jankowski (2009), first introduced by Blazie Engineering in the mid-1980s these easy-to-use personal organizers allow a person knowledgeable in Braille to create documents, read text, keep addresses and appointments, and access a list of special utilities; and to do so almost a decade before the sighted found similar convenience in the Palm Pilot and Pocket PC. Today, these devices are all grown up, and like the technology in common use by the sighted, most Notetakers can perform tasks which blur the line between portable computers and note-book computer.

Johnsen (2005) pointed out some characteristics that set Notetakers apart from PCs. Notetakers offer instant on and off capability. Notetakers use the Windows CE, or a related mobile operating system rather than Windows XP, which operates on the conventional PC. Again, notetakers offer at least some specialized programs and functions that address the specific needs of the blind. Notetakers typically offer Braille functionality and, in the case of those with a Braille keyboard, can be operated with Braille input exclusively.

Notetakers are produced in families with several variations on a basic theme. As many as six models may be available, all of which share a common software and

hardware design. Examples are the Braille Note family of products from Human ware and the Pac Mate products from Freedom Scientific. Two kinds of input are available, Braille and QWERTY (or typewriter). Each of these is available with an integrated 32-character Braille display, an 18-character Braille display, or with no Braille display, providing output with speech only. Units that offer a refreshable Braille display also provide spoken output which can be used in conjunction with the Braille display or turned off for Braille only operation (Kirk, Gallagher & Anastasiow, 2003).

According to the authors, with Windows, today's Notetakers can interface directly with a PC. Files can also be saved to various kinds of storage cards or to a number of standard storage devices, such as thumb drives or external hard drives. When disconnected from the Notetaker these storage devices can be connected to a PC for file transfer, used as a Braille display of the PC output, or as a speech synthesizer voicing the output from screen access software running on a PC.

In a similar stance, Lewis and Doorlag (2010) contend that the range of functions which a notetaker of today can support dwarfs the first generation of the Blazie products. In addition to full word processing (including MS Word support) the devices will hold almost limitless contacts, support email, Web browsing, audio file playback (including real-time streaming from the net), global positioning system technology (GPS) for navigation and orientation as you travel, and a host of other features. Notetakers can also print directly to a Braille embosser or be connected to a conventional printer for text output.

There are also dedicated refreshable Braille hardware devices which can be connected to a desktop or laptop computer to provide Braille output for the print text on the computer screen called refreshable Braille displays, these devices allow the user to interact with his/her computer using Braille. They are called refreshable

because the unit is made up of a line of pins that move up and down to display the Braille dots. Braille displays also have navigation keys so the user can move around the computer screen without taking his/her hands from the display to perform tasks. According to Mason (2002), it is important to note that screen access software such as JAWS, Window-Eyes, or similar programs must be present in order for the Braille display to function on a computer using the Windows operating system. Braille displays are available in units from 20 to 80 Braille cells.

2.4.5 *The scanner and optical character recognition (OCR)*

The scanner and optical character recognition are another set of resources that are embarked on to provide for smooth teaching and learning of the visually impaired in inclusive schools. Maxwell (2002) pointed out that Flatbed scanners are common hardware devices that can be found at any place that sells computer equipment. They are commonly used to scan photos into electronic files on a personal computer. However, they can also be used to scan text material. When used in conjunction with a specialized optical character recognition program for the blind, the scanned text can be read aloud immediately in synthesized speech. This makes virtually any typed print material accessible to the blind user.

According to Merriam (2009), many kinds of documents can be read, but not all. Handwriting cannot be recognized yet and some formats are difficult to render with speech, such as complex tables or graphical information. As noted earlier, human intervention may be necessary to obtain the best results. Patton (2002) posed that scanning large books takes many hours and for the pupil this may be using valuable time which could be spent learning the subject matter rather than placing page after page on a scanner.

Time can be saved by scanning only the pages needed to complete assignments instead of an entire book. Patton contends that two popular optical character recognition programs for blind users are Kurzweil 1000 and OpenBook. Both of these programs come with speech output and can read documents aloud as they are scanned by the scanner. The Kurzweil and OpenBook programs offer many features including editing, book marking and even adding notes to documents. Other files may be opened and edited including some PDF and HTM files. These programs also have options to save files for future use and translation to Braille. It is also possible to create MP3 audio files.

Another effective resource for the visually impaired in inclusive settings is the Braille keyboard which is a specialist input device that allows the user to type and enter text or instructions for the computer in Braille (Reynolds & Fletcher-Janzen, 2004).The authors say that the image on the left shows a Bluetooth powered Braille keyboard that can connect to a computer, smartphone or tablet (if they are Bluetooth enabled). The device on the right is also Bluetooth enabled and can link to access packages such MobileSpeak, Talks and modern operating systems. According to the author, the braille display which is a piece of equipment that connects to the computer also reads the screen text and presents it to the user via a refreshable Braille display.

2.5 Challenges Teachers Face in Teaching Pupils with Visual Impairments in Inclusive Schools

Evidence from the special needs education literature confirms that challenges in the provision of education to pupils with visual impairments in the regular school are embedded in school aspects such as the schools' physical environment, teachers' training and professional development, class size, curriculum choices available, lack of assistive devices, and teaching materials (Ocloo & Subbey, 2008).

2.5.1 *The school environment*

According to the authors, the schools' environment poses a lot of challenges in the practice of inclusive education for the Blind. They stated that the physical makeup of the schools poses challenges to management of any inclusive school for the Blind and the visually impaired in general. Similarly, Mayumbelo (2006) found that most inclusive schools were not physically designed to accommodate persons using wheelchairs as well as those who are blind. As a result, it can, thus, be concluded that the current inclusive schools were not initially built with the vision for inclusive. This being the case, it is expected that school management in inclusive schools will always be confronted with issues of accessibility.

Human (2010) revealed that an inclusive school for learners with visual impairments is not safe because it has stairs, stones or pavements. All schools that officially practice the inclusion for learners with visual impairments in many parts of Africa were built before the ratification of Jomtien Convention on EFA and the 1994 Salamanca Convention on Inclusive Education. These schools were not specifically built for inclusive education purposes. They only happened to be used for inclusion of learners with visual impairments when governments decided to pilot the inclusive education philosophy. The author continues to speculate that when the physical facilities of the current inclusive schools were built, there was no legal mandate binding contractors to build structures that are accessible by learners and community members with disabilities.

A study by Haihambo (2010) on the responses of vocational training institutions in Namibia to inclusion of pupils with general disabilities revealed that, from managements` perspective, pupils with disabilities were hindered by non-responsive infrastructures. Although this study was conducted in a different context

from that of the inclusion of learners with visual impairments in a mainstream secondary school, its findings confirmed the importance of friendly infrastructures if inclusive schooling is to become a success. Haihambo further revealed that some challenges are also based on institutional structures that made it difficult for pupils with disabilities to access venues. This study was carried out in institutions of high education in Namibia to explore the challenges of inclusive schooling to pupils with disabilities.

If you're a teacher faced with helping to make the decision for or against placing a pupil with visually impaired in a regular education classroom, it goes without saying that your goal is to place the child in the best possible learning environment. According to Arikewuyo (2009), the question is where exactly is that? Many argue the case for inclusion. Visually impaired pupils have many challenges. Those challenges should be considered before making this important decision.

2.5.2 *Pupils' characteristics*

The first question teachers ask is what sort of support will be in place for the pupil whose sight is not optimal? The author pointed out that most regular education teachers have no idea how to deal with a pupil who uses Braille. Therefore, a teacher skilled in teaching Braille should be available to directly teach the pupil with this type of disability, as well as assist the regular education teacher. This means both teachers must work closely together in order to make this situation work well. This can happen, but it requires a lot of hard work. Aula (2012) stated that

> Most school systems do not allow for a Visually Impaired teacher to be available all day, so the schedule should be worked out in a way that meets the pupil's needs within the limits of the visually impaired teacher. (p. 85)

Learners with visual impairments may or may not exhibit cognitive delays, but there are some learning considerations that may not be obvious. Auala, Amukugo and Mushaandja (2011) confirmed that young children with blindness or low vision are functioning in a limited world, where the sense of sight is either severely limited or totally removed. Learning challenges exist simply because the visually impaired child is not able to learn from what he sees. This carries over to the classroom. If placed in a regular education classroom, will the child be able to make academic and environmental gains as well as he would in a school where teachers are trained to bridge these gaps? This should be considered when making the decision of best placement.

Challenges with social integration have also been highlighted by Botha (2006). According to the author, many children with visual impairments have significant problems adapting socially in the regular classroom. These children may not easily accept a blind or low vision child without some direct support from teachers. Even then, social adaptation is unfortunately not easily accomplished. The ability of a child to socially adapt depends on the individual. Some children may make the adjustment easier than others. In other cases, a school for the blind may be the best place for a child with visual impairments to feel accepted.

2.5.3 *Teacher factor*

Studies found that lack of staff professional development or skills, lack of qualified secondary special education content specialists, as well as inadequate training of staff were major setbacks in realising inclusion in schools (Human, 2010). Similarly, Eleweke and Rodda (2010) have also referred to inadequate personnel training programmes as a challenge confronting successful inclusive education. In the same vein, the Ministry of Education and Culture (1993) of Ghana in a policy for

the Education Sector, Towards Education for All, noted that schools are already overburdened and teachers who have little specialised preparation may not be able to develop constructive and supportive learning environments for children entrusted to them.

Mostert (2001) indicated that most teachers worldwide have very little or no training in the area of special needs and, consequently, they are not in a position to give necessary support to learners with special educational needs in the regular school system. These findings confirm the essence of professional development and in-service training for teachers, especially those in inclusive settings.

It is confirmed that classroom teachers at all levels feel inadequately prepared to meet the needs of pupils with disabilities (Norman, Caseau & Stefanich, 1998). Also the Ministry of Education in Namibia reported that the lack of teachers' pre-service training on inclusion was the main barrier to inclusive education in Ghana (Ministry of Education, 2008), and Zimba (2011) also indicated that lack of in-service training is a challenge in an inclusive school for learners with visual impairments.

One crucial skill teachers of learners with visual impairments need to have is brailing and de-brailing. Human (2010) indicated that teachers in Namibia were sent for brailing courses at the introduction of the inclusion of learners with visual impairments in the mainstream school. This was a good idea of training teachers how to read and write in Braille. However, their brailing skills faded with time because they never practised it. Some of the teachers never had a chance to work with learners with visual impairments and put into practice the skills that they learned after their training. Human observed that, some teachers who worked with learners with visual impairments relied on the assistance of their resource teacher instead of using their skills; therefore, they never got a chance to practice the skills they gained.

Massenga and Mkandawire (2007) found the lack of knowledge and skills to manage the teaching and learning of children with special educational needs to be one of the current sources of exclusion. Knowledge is acquired through training and education. If there are no training programmes aimed at enhancing inclusion, this may result into a challenge to management. In their study titled South African Teachers' Voices on Support in Inclusion, Eloff and Kgwete (2007) identified challenges that mainstream educators had to contend with, which included lack of skills and competence. They maintained that skills and competence help teachers better understand inclusive schooling, and also empower teachers with skills that will help them meet learners' diverse needs.

The inclusion of learners with visual impairments requires teachers with the knowledge and skills to manage teaching and learning. Knowledge and skills can be acquired through pre-service and continuous training throughout the professional career of teachers. Having reviewed literature on this theme, it appears that for Namibia, the lack of both pre-service and continuous training during service continue to remain an impediment for the success of inclusion for learners with visual impairments.

Anecdotal data indicates the teacher-learner ratio in many African countries is characterised by high numbers of learners per teacher, a practice which is common in previously disadvantaged regions. Unrealistic teacher-learner ratio makes it extremely difficult to provide quality education (Iipinge, n.d). Good teacher-learner ratio is crucial in an inclusive class. Currently, the practice in Namibia is that there are as many as 40 or more learners in a normal school setting. The inclusive school has more or less the same average number of pupils in a classroom. If an inclusive class is

overcrowded, it could impact the teaching and learning negatively. A teacher will not be able to give attention to individual learners to cater for their diverse disabilities.

One of the obstacles to achieving meaningful inclusion in developing countries is large class sizes (Eleweke & Rodda, 2010). Also, Ocloo and Subbey (2008) investigated the opinions of basic school teachers towards inclusion in Hohoe District in Ghana and found that respondents lamented about large class size, which always posed insurmountable challenges to effective teaching. Their findings can be related to challenges facing members of school management regarding how the large class size can affect quality teaching.

According to Mostert (2001) and Eloff and Kigwete (2007), large class groups make it very difficult for the general classroom teachers to cope with learners on a daily basis and to give attention individually. Also Hipondoka, cited in Lewis (2002), indicated that class size is a barrier to the implementation of inclusion of the visually impaired.

Carpenter and Dyal (2007) also affirmed that overcrowding is a challenge to inclusive schooling. Developing countries' benefits of inclusion are not being achieved because developing countries have economical and developmental difficulties, therefore achieving Western models of inclusion will remain unrealistic. In most developing countries, school managements are challenged by overcrowded classrooms because it exhausts teachers' energy (Doswell, 2007).

There is substantial evidence from the research reviewed that high teacher-pupil ratio have negative impact on effective teaching and could affect effective management of inclusive schools for learners with visual impairments. Unlike elementary school teachers, high school teachers work with a large number of pupils in multiple classes throughout the day. They also teach in a didactic manner, which is

directed to a large group, rather than to individual pupils (Van Reusen, et al., 2001). Pupils with special needs including students with blindness, frequently require individual instructional contact time, a need that cannot always be met in the general education setting due not only to a large number of pupils present, but to general education teachers lack of knowledge in regard to educating pupils with special needs.

General education teachers are trained as content area specialists, equipped with knowledge about their area of expertise. What not all general education teachers are equipped with, are the skills and strategies to be sure all pupils grasp the knowledge they provide. Specifically, general education teachers are not trained in how to make appropriate modifications and accommodations to meet the individual needs of pupils with special needs. Without this training, general education teachers doubt their ability to educate and meet the needs of pupils with special needs in their classroom. This doubt in ability affects general education teachers' attitudes towards educating pupils with special needs in their classrooms (Denzin & Lincoln, 2003).

Training in special education for general education teachers is more of a recent phenomenon. According to Derrick, Stacy, and Gaylen (2011), within the last twelve years a college course on educating pupils with special needs has become a requirement for earning a teaching degree. This requirement leaves some of our current educators unfamiliar and untrained on how to successfully educate pupils with special needs. Specifically, general education teachers struggle greatly with making and implementing meaningful and purposeful accommodations and modifications for pupils with special needs. Research conducted by Bender, Vail, and Scott (1995) found that general education teachers were not implementing modified instruction that would benefit pupils with learning disabilities in their classrooms. Another study, conducted by Leyser and Tappendorf (2001), focused primarily on the types of

accommodations and modifications general education teachers reported using in their classrooms to meet the needs of pupils with special needs. Like Bender, et al. (1995), Lesyer and Tappendorf also found the types of strategies that would benefit pupils with special needs, such as adaptations to tests and assignments, cooperative learning groups, and alternative teaching strategies, were the strategies teachers reported using least often. If teachers are not using strategies that benefit pupils with special needs, then no doubt these pupils will not be successful in the general education classroom.

If success is not evident, it is no wonder many general education teachers question the presence of these pupils in their classrooms. In the study by Lesyer and Tappendorf (2001), general education teachers reported using very often, strategies that allowed them to remain in control of the class and hold pupils self-accountable. Neither of these strategies is known to be successful with educating pupils with special needs, and one might wonder if these strategies are successful with educating most pupils. In the view of De Vos, et al. (2005), if all general education teachers were trained on how to educate pupils with special needs, and implemented the training they were given, then they would be providing pupils with special needs the opportunity to thrive in the general education setting. If adequate training were provided, then general education teachers would have the ability to teach a wide range of ability levels in their classrooms.

According to De Vos, et al. (2005), unfortunately, this is not the case, as many high school teachers teach to pupils who are in the middle (Van Reusen, et al., 2001). By teaching to the middle, general education teachers are excluding those pupils who are often thought of as talent and gifted, and those who are normally classified as having special needs.

Several other challenges interfere with the provision of education to pupils with visual impairments in inclusive classrooms. The challenges are reflected in the following studies conducted, inside and outside Tanzanian context. The study by Gronlund, et al. (2010), conducted in two developing countries, namely Tanzania and Bangladesh. The study's aim was to answer the question of, how can assistive technology effectively be used for inclusive education in developing countries? The study came up with findings showing that Tanzania does not have specific policy on inclusive schooling. Inclusive schooling is mentioned in some of the policy documents such as disability policy and education and training policy but these policies do not state how inclusive education should be implemented, monitored and evaluated. The study revealed that teaching and learning materials for pupils with special needs are lacking.

The study by Kesiktas and Akcamete (2011), sought to determine the degree to which the professional standards for Turkish teachers of pupils with visual impairments were addressed during pre-service training and the degree to which the in-service teachers of visual impairments implemented these professional standards. Findings of the study showed that, there is insufficient knowledge and skills among teachers regarding implementation of inclusive teaching for pupils with visual impairments. Another study by Miles (2003) conducted in Temeke district in Tanzania to explore appropriate and sustainable ways of building capacity of key stakeholders in education to reflect, analyse and document their experiences of promoting inclusive schooling, revealed that inclusive schooling is a difficult concept to understand among teachers.

Simon, et al. (2010) conducted a study in Spain with the aim of analyzing the process of inclusion to pupils with visual impairments. The study found out that

schools do not have appropriate teaching and learning resources to help pupils with visual impairments learn better in inclusive classrooms. Additionally, the study found that, there is a lack of collaboration and participation of parents in the educational affairs of their children. Moreover, the findings revealed that; teachers do not have enough knowledge of inclusion and how to teach pupils with visual impairments in inclusive classrooms.

Teaching methods also pose challenge to effective inclusion. Lewis and Little (2007) conducted a study with an intention of providing insight on the current situation of inclusion in four countries, namely Nepal, Tanzania, Vietnam and Zambia. The findings of the study in Tanzania revealed that, teachers are not educated enough in sign language, use of braille materials, preparation of hearing and aids, tactile diagrams and maps etc. to be able to face the challenges of inclusive teaching. It was also found out that teacher education is insufficient in the components of inclusive schooling. Finally, the study revealed that rigid curriculum is also a problem for implementation of inclusion. Teaching methods and examination systems are centrally controlled contradicting with the efforts to make inclusive environments for all children regardless of their learning differences.

Labeling and negative attitudes have also been cited by several educationists the world over as a major challenge to the inclusion agenda. For instance, Mmbaga (2002) conducted a study in same district in Kilimanjaro region in Tanzania with the objective of determining the existence of educational arrangements and processes that ensure effective learning for all pupils in primary schools in Tanzania. The study came up with the findings that, teachers were categorizing and labeling pupils into "bright and dull". The "bright pupils" were given more priority to answer questions unlike the "dull pupils". Therefore, teaching methods did not consider the needs of

pupils with special needs. Pupils with visual impairments were present in the classes but teachers were teaching as if all pupils were sighted using "talk and chalk" strategy.

Lack of teacher collaboration and rigid curriculum has also not been left out of the challenges confronting the inclusion of the blind pupil in inclusive settings. New Brunswick Association for Community Living (2007) conducted a study to provide insights on the systemic barriers to the implementation of inclusion in New Brunswick. The study found lack of collaboration among teachers to teach in inclusive classrooms. It was also observed that, rigid curriculum does not allow collaboration (co-teaching) among teachers.

2.6 Summary of Literature Review

The literature has dealt with the various opinions teachers hold about teaching children with visual impairments in inclusive school. The literature has also elaborated factors influencing teachers' opinions about teaching pupils with visual impairments. These included training, teaching experience and class size. The literature has also highlighted resources for effective teaching of the visually impaired and has focused on the assistive devices, braille embossers, screen access software, scanner and optical character recognition. The literature also recorded the challenges teachers face in teaching pupils with visual impairments.

Although several studies have reported the opinions that teachers have concerning teaching pupils with visual impairments, very few studies have focused on the factors that influence teachers' opinions, especially in Ghana. Although several research has been done about resources available for teaching pupils with visual

impairments, in Ghana, not enough has been done on teachers ability to manipulate those resources.

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CHAPTER THREE

METHODOLOGY

3.0 Introduction

The highlights of the chapter included the research design, population, sample and sampling technique, instrumentation, validity and reliability of the instruments, data collection procedure and data analysis.

3.1 Research Design

This study was a survey and the researcher adopted the cross-sectional design. A cross-sectional research design involves looking at people who differ on one key characteristic (such as age) at one specific point in time. The data is collected at the same time from people who are similar on other characteristics but different on a key factor of interest such as age, income levels and geographic locations. This is particularly important since the sample for this study are all teachers but with different ages and work experiences. According to Trochim (2006), the cross-sectional design uses different groups of people who differ in the variable of interest but who share other characteristics such as socioeconomic status, educational background, and ethnicity. Cross-sectional studies are observational in nature and not causal or relational.

According to Trochim (2006), unlike longitudinal studies that look at a group of people over an extended period, cross-sectional studies are used to describe what is happening at the present moment. As a result, this type of design is frequently used to determine the prevailing characteristics in a population at a given point in time. It was based on this added advantage of this type of design that helped to find out the opinions of teachers on the teaching of pupils who are visually impaired in terms of the resources available, skills and teaching strategies, factors that influence teachers'

opinions as well as the challenges being encountered by teachers in their teaching of pupils with visual impairments in the Ada East District of the Greater Accra Region of Ghana.

The cross-sectional research design comes with a lot of advantages that entice researcher to embark on its usage. According to Creswell (2009), cross-sectional research designs are usually relatively inexpensive and allow researchers to collect a great deal of information quite quickly. This advantage was particularly important since the use of this design helped the researcher to harvest the needed data for the research in good time. Data are often obtained using self-report surveys and researchers are often able to amass large amounts of information from a large pool of participants. Another benefit is that researchers can collect data on some different variables to see how differences in sex, age, educational status and income might correlate with the critical variable of interest.

Cross-sectional surveys designs are equally beset with some amount of disadvantages too. In the view of Trochim (2006), there are several while the design sounds relatively straightforward, finding participants who are very similar except in one specific variable can be difficult. Cross-sectional studies generally require a large number of participants, so it is more likely that there will be small differences among participants. While such differences might seem minor, they can influence the study's findings. Also, groups can be affected by cohort differences that arise from the particular experiences of a unique group of people. Individuals born during the same period may share important historical experiences while people born in a given geographic region may share experiences limited solely to their physical location.

Notwithstanding the numerous disadvantages that come with cross-sectional research designs, it was prudent to be used in this study since the researcher was

interested in finding a 'snapshot' of the outcome and the characteristics associated with it, at a specific point in time, which is the opinions of teachers towards the teaching of pupils with visual impairments in some selected inclusive schools in the Ada East District. Unlike the experimental design where there is an active intervention by the researcher to produce and measure change or to create differences, the researcher used the cross-sectional designs in order to focus on studying and drawing inferences from existing differences between the subjects of the study or phenomena.

3.2 Population

Population refers to the entire universe of elements or cases the researcher is interested in for the particular study (Fraenkel & Wallen, 2006). The target population for the study consisted of 94 teachers who were directly involved in regular schools with pupils with visual impairments in the Ada East District of the Greater Accra Region of Ghana.

3.3 Sample size

A sample size denotes a small and representative proportion of the research population (Cohen, Manion & Morrison, 2004). A sample size of 60 was used for the study. The researcher chose 50 as the sample size because the entire school population could not be used in the study due to time and financial constraints. However, this does not affect the comprehensiveness of the study since the number represents more than half of the sampling frame. Sarantakos (2007) contends that sampling enables the researcher to study a relatively small number of units in place of the target population and to obtain data that is representative of the whole population. Sarantakos suggests that a sample size of thirty is held by many to be the minimum number of cases if

researchers plan to use some form of statistical analysis on their data. However, the writer cautions that the size of the sample would depend on the relationship researchers want to explore within the sub-groups of the entire sample.

3.4 Sampling technique

Basically, the simple random sampling technique was used to select the sample for the study. The simple random technique was used because it gave all units of the target population equal chances of being selected. Sarantakos (1998) contends that sampling enables the researcher to study a relatively small number of units in place of the target population and to obtain data that is representative of the whole population.

According to Amedahe (2002), simple random sampling is appropriate when a population of study is similar in characteristics of interest. In the process, names of all the teachers in the schools were written on pieces of papers and put in a bowl. Fifty of the names were randomly picked by the researcher as sample to represent the population for the study.

3.5 Instrumentation

A Likert scale questionnaire was the fundamental instrument used for the collection of data. The questionnaire items were informed by the objectives of the study. The first section of the questionnaire was used to elicit information on opinions teachers hold about the teaching of pupils with visual impairments in an inclusive setting. The second section elicited data on the resources for effective teaching of pupils with visual impairments in an inclusive setting. The third section also elicited data on the factors that affect the opinions of teachers of the visually impaired in the regular stream and the fourth section also comprised of items on the challenges in

teaching pupils with visual impairments in the regular setting. The questionnaire consisted of 26 items.

The use of Likert items was very necessary for the study more particularly because it helped to elicit straight-forward answers from the respondents which avoided ambiguities in their responses. This importance of the scale to the study has been pointed out by Creswell (2012) that the Likert scale is the most widely used ordinal scale which measures the levels of agreement/disagreement. A Likert-type scale assumes that the strength/intensity of experience is linear, i.e. on a continuum from strongly agree to strongly disagree, and makes the assumption that attitudes can be measured.

On the scale the rating was arranged in five (5) columns. The Likert scale provides the basis for neutral response, as well as ranking highest and lowest responses of respondents in the study. Here, the weight attached ranges from four (4) to zero (0) with responses coded 0-4. Responses were ticked (√) in the available boxes with correspondents boxes attached. The Likert scale indicated the following: Strongly Agree (SA) - (4); Agree (A)-(3); Strongly Disagree (SD) – (2); and Disagree (D) - (1).The strongly agree (SA) exhibits the most powerful weight of four (4) to the issue of discussion.

3.6 Validity/Reliability of Instrument

In order to further enhance the validity of the study, the questionnaire items were discussed with the researcher's supervisor and some lecturers in the Department of Special Education in the University of Education, Winneba for expert evaluation. This enhanced both the face and content validity when they helped to examine whether the items were related to the research questions and comprehensively cover the details of the study. Suggestions made were incorporated to refine the content and

improve the questionnaire. Further, the validity was enhanced as a result of further adjustments made after the pre-testing. All the modifications pointed out at the pre-test stage went a long way to enhance the validity of the study.

3.7 Pretesting of research instrument

There was an initial stage of pretesting of the questionnaire items. This was done to ascertain the reliability of the questionnaire items. Creswell (2012) recommends that for many research studies, it is very important to pretest the research instruments in order to detect ambiguities that might exist in the questions or items of the research instrument (s). As a result, the researcher involved 10 teachers of inclusive schools in the Efutu Municipality of the Central Region of Ghana in the pretest. The participants were asked to comment frankly on the clarity of the questionnaire after reacting to the items.

After the pretest, the various suggestions and comments were considered in restructuring the questionnaire. It was at this stage that the items were increased to 20 instead of 12. Items 4 and 7 were restructured since all the respondents were not clear about the requirements of the item. Furthermore, there was a typographical effort in the wording of question 2 which gave a different meaning to the item. This was also duly corrected as well.

3.8 Data Collection Procedure

The researcher obtained a letter of introduction from the Head of Department of the Department of Special Education of the University of Education, Winneba (Appendix B). The letter spelt out the purpose of the study and the need for individual participation.

The purpose of the study and procedure for responding to the questionnaire were explained to respondents. The researcher used a total of 7 days to distribute and collect the entire necessary questionnaire used for the study. In order to avoid biases, the questionnaires were distributed at random. For example the researcher distributed 3 questionnaires each in eight schools selected at random for the study. The very first 3 teachers who were met in the respective schools were handed the questionnaire to be completed. They were given a maximum of 7 days to complete the questionnaires.

3.9 Data Analysis

The quantitative data from the Likert scale questionnaire were analysed with simple percentages. The results of the analysis were represented on frequency tables for easy identification and reading. The results concerning each set of questions deduced from the various research questions were analysed separately and were later put together to acquire the general views of the respondents.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

The chapter presented a descriptive analysis of the data that were gathered from the research sites in relation to the opinions of teachers towards teaching pupils with visual impairments in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana. The research questions of the study were analyzed in terms of opinions teachers have about teaching pupils with visual impairments in inclusive school, factors informing teachers' opinions about teaching pupils with visual impairment, the resources available for effective teaching of pupils with visual impairments in inclusive schools, the challenges teachers face in teaching pupils with visual impairments in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana.

4.1 Research Question 1: What opinions do teachers have about teaching pupils with visual impairments in inclusive school?

The questionnaire was used to answer research question one which consisted of eight statements. Table 1 gives an overview of opinions of teachers about teaching pupils with visual impairments in regular schools in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana.

Table 1: Teachers' opinions about teaching pupils with visual impairment in regular schools

S/N	ITEM	SA	A	N	D	SD
1	I believe that pupils with visual impairment can learn equally like those with sight	8(16)	15(30)	0	19(38)	8(16)
2	Teaching visually impaired pupils is difficult	2(4)	24(48)	8(16)	15(30)	1(2)
3	I am confident in my ability to teach children with visual impairments	0	10(20)	9(18)	16(32)	15(30)
4	It is easy to use TLMS when teaching children with visual impairments	4(8)	11(22)	8(16)	16(32)	11(22)
5	Some students with visual impairments are too disruptive during teaching and learning	5(10)	17(34)	12(24)	11(22)	5(10)
6	Students with visual impairments easily understand concepts when concrete materials are used in teaching	7(14)	23(46)	10(20)	5(10)	5(10)
7	It is difficult to motivate students with visual impairments using non-verbal expressions	16(32)	17(34)	6(12)	8(16)	3(6)
8	I believe that teaching students with visual impairments will lead to low performance of the class since its time consuming	13(26)	11(22)	7(14)	14(28)	5(10)

Source: Field data, 2017

Table 1 shows the pattern of responses of the respondents in connection with how they feel about teaching pupils with visual impairment in inclusive schools. A total of eight items were responded to by the respondents. In each case, the total score of responses together with the respective percentages of the total respondents were presented. The raw score of the responses were presented together with the percentage scores in brackets. The respondents in favour of "strongly agree" and "agree" were collapsed into one aspect as "agree" likewise those under "disagree" and "strongly disagree" also collapsed into "disagree". However, those not in favour of any side were still captioned as "no idea".

The first concern of the researcher under this research question was to find out whether or not pupils with visual impairments learn at the same pace with their sighted counterparts or not. The statement posed was "I believe that pupils with visual impairment can learn equally like those with sight. In response, 23 of the respondents that represent 46% agreed to the statement posed. Whiles the remaining 27(54%) also were in disagreement to the statement. None of the respondents indicated that she had no idea about the statement posed.

The almost equal numbers of responses in favour of those who agreed to the statement as well as those kicking against the statement make it rather difficult to accept the contention of UNESCO (2010) that equal opportunity to learn is no less a human right than equal entitlement to be in school regardless of parental income, gender, language or ethnicity. However, in many countries large disparities in learning achievement exist and are heavily influenced by the type of school pupils attend and their family backgrounds. Differences between schools play a critical role in the level of equity within education systems. UNESCO posited further that in many developing countries, education systems are often marked by large variations across schools in

class size, availability of books and teaching and learning materials, teacher and school building standards. Improving school quality and narrowing differences between schools will reduce inequality in pupils' performance.

The next statement that was of interest to the researcher was "Teaching pupils with visual impairments is difficult". In response to this item, 26(52%) of the respondents were in agreement with the statement whiles 8(16%) had no idea on the statement. However, 16(32%) also said there disagreed with the statement. The rather high numbers of respondents who claimed the statement is true go a long way to support the study of Opdal, Wormnæs, and Habayeb (2001) who found that in Palestine, teachers opinions indicated that inclusion of learners with special needs into regular schools with those with physical disabilities, visual impairment and hearing impairment more includable than those behavioral problems and learning difficulties in specific areas such as reading and writing difficulties. The respondents in that study indicated that factors such as: nature and severity of disability, teachers' experience and their beliefs about the power of teaching, professional training of teachers, number of subjects taught, gender of the teachers and characteristics of the schools influenced the teacher's perspectives towards inclusion of pupils with disabilities.

Another statement that was important to the researcher was "I am confident in my ability to teach pupils with visual impairments". The responses were as follows; 10 respondents that represent 20% indicated that they don't have challenges handling pupils with visual impairments in the inclusive schools whiles 9 of them were not sure whether they have challenges or not. However, a greater number of 31 respondents that represent 62% said they disagree with the statement. The trend in response where majority of the respondents skewing towards disagreement of the statement make assertion of Berling (2012) true, when he contended that teachers of the visually

impaired need to embrace inclusive beliefs and practices that generally support all learners and make education a welcoming and positive experience for all; and they need to be sufficiently confident and skilled to meet the specific learning needs of pupils with disabilities. The scholar posits further that many of the learning needs of pupils with disabilities can be met by generally making the education system more flexible, welcoming and responsive.

Another item on the questionnaire required respondents to state whether or not it is easy to use teaching and learning materials when teaching pupils with visual impairments in the regular education classrooms. Fifteen respondents, representing 30% of the sample, stated that it was not easy teaching and learning materials in inclusive classrooms; 8 of them did not indicate whether they found it easy or not, while a majority of 27 respondents, representing 54% of the sample indicated that they found it rather difficult using teaching and learning materials in inclusive classrooms. .

This trend in responses affirms the information of Gale (2006) that the new structure and content of Education in Ghana states that, teaching as an activity of the blind and other visually challenged pupils can be enhanced or done effectively when there is the use of teaching-learning materials such as wall charts, chalkboard illustrations, diagrams, photographs or pictures. The use of teaching and learning materials is very important at all levels of pre-university education. Effective teaching is dependent on good communication between the teacher and the pupils. The scholar indicated that verbal instruction, which seems to be the easiest form of instructional delivery system besides real experience, is always very abstract. Since pupils enter into schools with varying degrees of abilities and potentials, teachers' need

instructional media to help them communicate effectively, and thus cope with pupils needs based on their abilities.

The researcher also requested that the respondents should indicate their views on the likelihood of the presence of the visually impaired causing any forms of disruption to teaching and learning. The statement issued was "Some pupils with visual impairments are too disruptive during teaching and learning*"*. Twenty-two (44%) of the respondents said they were in agreement with the statement; 12 (24%) were unsure, while 16 (32%) of the respondents disagreed with the statement. This corroborates the findings of Booth and Ainscow (2002) that some instructional time is lost due to several distractions and only partially effective classroom routines and procedures because of the presence of the visually impaired pupils. The teacher's management of instructional groups, transitions, and/or the handling of materials and supplies is inconsistent, leading to some disruption of learning. With regular guidance and prompting, pupils follow established routines.

*"*Pupils with visual impairments easily understand concepts when concrete materials are used in teaching*"* was the next statement of the researcher. In this instance, 30 respondents, represents 60% of the sample, agreed with the statement; 10 respondents, representing 20% of the sample were neutral, while 10(20%) indicated that they disagreed with the statement. Looking at the direction of skew, it can be said that the observation of Ghergut and Grasu (201*2)* that learning is an experience gained through modification and as the scholars indicated, learning is considered an active process and not a passive observation. This implies giving learners the opportunity to acquire direct learning experiences through the manipulation of concrete objects.

The researcher was also interested to know if the students with visual impairments encountered difficulties with non-verbal communication. The precise

statement posed was: “It is difficult to motivate pupils with visual impairments using non-verbal expressions”. The response was as follows; 33(55%) of the respondents answered in the affirmative; 6(12%) of respondents were neutral, while 11(33%) also did notsupport the statement. The higher numbers of respondents responding in the affirmative make Berling’s (2012) view point true. They said that for many pupils, especially those with disabilities, learning how to communicate effectively is extremely difficult. Using gestures and formal signs is a way to facilitate expressive language and opens doors for so many kids who, for whatever reason, simply have not yet been able to develop verbal skills. Almost all young pupils use gestures when learning to talk. They wave bye-bye, shake their little heads“no” and blow very wet kisses. Such actions clearly express a thought, an intention, or an emotion and all can be done without speaking.

The next statement was “I believe that teaching pupils with visual impairments will lead to low performance of the class since its time consuming”. Again the respondents responded more to the affirmative. A maximum of 24(48%) accepted the statement as being true. Another 7 (14%) also did not have anything to say on the statement. The remaining 19 respondents representing (38%) also indicated that they are not in agreement with the statement.

The nature of the responses makes the contention of McHatton and McCray (2007) true when they said that the sighted pupils have visual cues that tell them how fast they should be moving. They might look at the clock on the wall; they might glance at their classmates' papers to see who is still working on the first side of the page and who has gone on to side two. You can provide equivalent nonvisual cues for your blind pupil. Point out to the blind pupil the rustling sound of pages turning so he/she can listen for how fast classmates are going. If the child can tell time, a Braille

watch or a talking clock could help. Periodically give verbal cues such as "About half of our time is up. You should be on number four or five by now".

4.2 Research question 2: What factors influence teachers' opinions towards teaching pupils with visual impairments in inclusive schools?

In this section the researcher sought to find out the actual factors that have led to the kinds of opinions teachers have about the teaching of pupils with visual impairments in the inclusive schools. The responses and the individual statements in this respect have been presented in the table below.

Table 2: Factors informing teachers' opinions towards the teaching of pupils with visual impairment in inclusive schools

S/N	ITEM	SA	A	N	D	SD
1	I have received adequate training in teaching pupils with visual impairments	3(6)	2(4)	2(4)	22(44)	21(42)
2	I can read and write Braille	0	0	1(2)	14(28)	35(70)
3	I have been teaching students with visual impairments for more than five years	0	0	4(8)	13(26)	33(66)
4	Teaching pupils with large class size affects the teaching of students with visual impairments.	21(42)	10(20)	0	10(20)	9(18)
5	I have adequate resources for teaching pupils with visual impairments.	0	0	6(12)	13(26)	31(62)
6	Teaching pupils with visual impairments is time consuming.	15(30)	10(20)	11(22)	9(18)	5(10)

Source: Field data, 2017.

From table 2, it can be deduced that the various statements and their respective responses have been summarized. For easy internalization and clarity, each of the numerical values has been provided a respective percentage in brackets. A total of six items were provided for the respondents to respond to.

The first statement presented was "I have received adequate training in teaching pupils with visual impairments". Here, the researcher was interested in finding out

whether the teachers have been given the requisite training that make them qualified to teach in the inclusive setting or not. The respondents responded as follows: Only 5(10%) of the respondents indicated that they are in support of the statement. Another 2 (%) of the respondents also pointed out that they have no idea on the statement posed, whiles 43(86%) also posited that they do not agree with the statement.

The higher numbers of respondents that responded towards the negative suggests that the findings of Human(2010) hold a lot of water when he concluded that lack of staff professional development or skills, lack of qualified secondary special education content specialists as well as inadequate training of staff were major setbacks in realising inclusive education in schools.

"I can read and write Braille" was the next statement posed by the researcher. It can be seen from the table that none of the respondents agreed the statement. 1 person was not sure whether he can read Braille or not whiles almost all the regular school teacher respondents indicated that they cannot read Braille. This is to suggest that the indication of Human (2010) about the people of Namibia is dissimilar to the situation in Ghana when he said that one crucial skill teachers of learners with visual impairments need to have is brailing and de-brailing. Human (2010) indicated that teachers in Namibia were sent for brailing courses at the introduction of the inclusion of learners with visual impairments in the mainstream school.

The next statement was "I have been teaching pupils with visual impairments for more than five years". Again, none of the respondents agreed to the statement. 4 (%) were neutral to the statement whiles 46 representing 92% indicated frankly that they have not taught the visually impaired in the last 5 years. This is suggestive that there is no respondent who has the requisite experience to handle the visually impaired in the inclusive schools. This surprising revelation goes a long way to

support Human (2010) when he contended that some of the teachers never had a chance to work with learners with visual impairments and put into practice the skills that they learned after their training. Some teachers who are working with learners with visual impairments relied on the assistance of the resource teacher instead of using their skills; therefore, they never got a chance to practice the skills they gained.

The fourth statement posed by the researcher was "Teaching pupils with large class size affects the teaching of pupils with visual impairments". Out of a total of 50 respondents, 31(62%) said that they agree with the statement whiles 19(38%) also indicated that they are not in agreement with the statement. The higher numbers of respondents in agreement with the statement point to the fact that Eleweke and Rodda (2010) were right when they said that one of the obstacles to achieving meaningful inclusion in developing countries is large class sizes. The trend in answering this aspect of the questionnaire is also in line with Ocloo and Subbey's (2008) investigation on the opinions of basic school teachers towards inclusive education in Hohoe District in Ghana when they found respondents lamenting that "large class size always pose insurmountable challenges to effective teaching".

"I have adequate resources for teaching pupils with visual impairments" was the next statement for the respondents to respond to. None of the respondents agreed to this statement whiles 6(12%) had no idea. A total of 44 representing 88% of the respondents also said that they do not agree to this statement. This suggests that the resources being supplied to the teachers are not adequate. The higher number of respondents responding in the contrary makes the viewpoint of Vaughn, et al. true when they said that class size, inadequate resources, teacher's attitudes towards Persons with disabilities, severity of the disability and lack of adequate preparation would affect the success of inclusion.

The last statement issued by the researcher was "Teaching pupils with visual impairments are time consuming". Fifty percent of the respondents posited that they were in agreement with the statement while 22% of them were unsure about what to say. The remaining 28% also indicated that they are not in agreement with the statement. However, the higher numbers of respondents that are in agreement with the statement are in agreement with Vandeyar's (2003) contention that lecturers must try to follow a logical structure in their lessons as this makes note taking and recording easier to follow. And also allow extra time for pupils with visual impairment to read through slides, assimilate information and respond before going on to the next stage.

4. 3 Research question 3: What resources are available for effective teaching of pupils with visual impairments in inclusive schools?

This section of the questionnaire was dedicated towards finding answers to the second research question of the study on whether or not there is sufficient resources in educating persons with visual impairments in the regular school setting or not. The table below summarizes the responses of the various respondents.

Table 3: Summary of the responses as harvested from the respondents on the resources for teaching pupils with visual impairments in the inclusive school setting.

S/N	ITEM	SA	A	N	D	SD
1	There is ready access to screen access software in my school	0	0	10(20)	15(30)	25(50)
2	Braille embossers are readily available in my school	0	0	10(20)	11(22)	29(58)
3	Note takers are readily available in my school	0	5(10)	10(20)	13(26)	22(44)
4	I have a resource room in my school	0	1(2)	12(24)	7(14)	30(60)
5	A resource teacher is attached to my school to assist the students with visual impairments	8(16)	7(14)	0	20(40)	15(30)
6	Magnifiers lens and telescope are available in my school	0	2(4)	10(20)	9(18)	29(58)

Source: Field data, 2017

The table presents a summary of data collected in respect of teachers' pieces of information on the nature of resources being used to educate pupils with visual impairments in regular schools. A total of six statements were presented for respondents to respond to. The summary of the responses have been presented at the end of each statement under a broad sub-heading of "agree", "no idea" and "disagree".

The first item presented under this set of questionnaire items was "There is ready access to screen access software in my school". From the table, it can be seen that none of the research participants agreed to the statement. 10 of the sample were of no view whiles the remaining 40 that represent 80% also indicated that they are not in agreement with the statement posed by the researcher. The rather higher percentage

of the respondents indicating in the contrary makes the assertion of Carrington, Deppeler and Moss (2010) that Screen Access Software are another set of software that are used to teach the persons who are blind in both the general education or the inclusive education classrooms. Meanwhile, in order to gain full and independent access to the personal computer, blind pupils must have a screen access program installed on their computer. The screen access program provides spoken, synthesized speech, output, using the personal computer's soundboard and loudspeakers or headphones.

"Braille embossers are readily available in my school" was the next statement of interest to the researcher. This equipment is very vital to the cause of blind education and it must be present in any school when blind pupils are enrolled. However, it was suprising to find out that none of the respondents indicated the presence of this equipment in their schools. 10 of them were not aware whether the equipment existed or not whiles 40 representing 80% answered straight to the point that they don't have the equipment. This revelation has defeated the New Times Corporation's (2012) advice that the Braille Embosser must be used to promote effective learning among pupils that are blind. According to the New Times Corporation, a Braille embosser, also referred to as a Braille printer, is a piece of very specialized computer hardware that allows Braille files that have been created on the personal computer to be produced in hard copy for the pupils to read.

The researcher was also interested in finding out whether or not there is the presence of note takers in the schools. 5 of the respondents that represent 10% indicated that they have note takers. 10 of them (20%) too were not aware whether there existed a note taker or not. The remaining 35 (70%) said there are no note taker in their schools. This very high percentage of respondents indicating that there are no

note takers have defeated the Rodina's (2007) view that before the start of the term the teacher of the blind is supposed to provide reading lists or course outlines well in advance to allow time for arrangements for taping or Brailing of texts to be made. The teacher must further ensure that reading lists are up-to-date, encourage the pupil to contact the Pupil Wellbeing Service assist in finding readers, note takers or other assistance, as necessary, be aware that guide dogs must not be refused entry to buildings and classrooms.

The next statement of interest was "A resource teacher is attached to my school to assist the pupils with visual impairments". From the responses, it is clear that 30% of the respondents have worked with a resource person in their schools whiles the remaining 70% have no resource teacher. This brings to mind that the ideals of Human (2010) are not feasible when this researcher site is considered. According to Human (2010), some teachers who are working with learners with visual impairments relied on the assistance of the resource teacher instead of using their skills; therefore, they never got a chance to practice the skills they gained (Human, 2010).

The attention of the researcher was also shifted to the use of magnifiers as a means of helping pupils with visual impairments to learn. The statement posed was "Magnifiers lens and telescope is available in my school". In response, 4% of the respondents pointed out that there are no magnifiers in their schools whiles 20% also said they don't know whether the equipment existed or not. The remaining 76% also posited that there are no magnifiers whatsoever in their schools. Again, it has been brought to light that the ideals of Human (2010) do not hold water when he said that some equipment or activities may need to be adapted or modified to allow pupils with visual impairments to participate in practical classes. Examples include: auditory

displays of visual information (such as talking thermometers), tactical displays of visual information (such as beakers with raised markings), clamps and other devices for holding items of equipment, and hand held, illuminated magnifiers. Microscopes can be an issue and electronic versions which can be linked to a computer screen are very helpful.

4.4 Research question 4: What are the challenges teachers face in teaching pupils with visual impairments in inclusive schools.

In this instance, the researcher sought to find out the problems teachers face in teaching persons with visual impairments in their inclusive schools.

Table 4: Challenges teachers face in teaching pupils with visual impairment in inclusive settings

S/N	ITEM	SA	A	N	D	SD
1	It is easy to explain concepts to students with visual impairments during teaching.	2(4)	11(22)	9(18)	17(34)	11(22)
2	Teaching abstract things to students with visual impairments is quiet difficult.	14(28)	12(24)	6(12)	8(16)	10(20)
3	I can read and write braille.	0	0	10(20)	12(24)	28(56)
4	I can adapt the curriculum to suit the needs of the visually impaired during teaching.	8(16)	12(24)	5(10)	11(22)	14(28)
5	I have access to TLMS used in teaching students with visual impairments.	6(12)	4(8)	2(4)	11(22)	27(54)
6	I can help students with visual impairments to use their assistive devices.	2(4)	10(20)	6(12)	7(14)	25(50)

Source: Field data, 2017.

Table 4 presents the analysis of responses presented by the respondents as far as the challenges they face in teaching persons who are visually impaired in their inclusive schools. A total of six Likert scale questionnaire items were presented by the researcher to be responded to by the respondents.

The first statement presented by the researcher was "It is easy to explain concepts to pupils with visual impairments during teaching". In response, a minority of 13 which represents 26% were in support of the statement whiles 9 respondents representing 18 % had nothing to say. However, 28 (56) of the respondents mentioned that it is not easy to explain concepts to the visually impaired pupil during teaching and learning process. The higher percentage of respondents responding contrary to the statement is supportive to what Lewis and Little (2007) have pointed out that teaching methods also pose challenge to effective inclusive education. The trend is almost the same as what is found in other parts of the world. For instance, Lewis and Little conducted a study with an intention of providing insight on the current situation of inclusive education in four countries, namely Nepal, Tanzania, Vietnam and Zambia. The findings of the study in Tanzania revealed that, teachers are not educated enough in sign language, use of braille materials, preparation of hearing and aids, tactile diagrams and maps etc. to be able to face the challenges of inclusive teaching. It was also found out that teacher education is insufficient in the components of inclusive education. Finally, the study revealed that rigid curriculum is also a problem for implementation of inclusive education. Teaching methods and examination systems are centrally controlled contradicting with the efforts to make inclusive environments for all pupils regardless of their learning differences.

The researcher was also interested in whether or not teachers could read the Braille or not. None of the respondents agreed that teachers could read Braille. Only

20 % of the respondents were of no idea on the statement. 80% of the respondents were in disagreement with the statement. The rather higher percentage of respondents who are not in disagreement with the statement makes the observation of Auala (2012) very true when he said that most regular education teachers have no idea how to deal with a pupil who uses braille. Therefore, a teacher skilled in teaching Braille should be available to directly teach the pupil with this type of disability, as well as assist the regular education teacher.

The next questionnaire item that was put forward was "I can adapt the curriculum to suit the needs of the visually impaired during teaching". It is important to note that curriculum adaptation is one of the most important characteristic of every teacher who handles pupils with disabilities in one way or the other. The responses for this questionnaire were very close, for instance, 20 of the respondents accepted the statement to be true whiles 25 did not accept the statement. The remaining 5 respondents did not take any direction in the responses. The close gap between the responses makes one want to find out whether teaching and learning is going on well or not. It makes one to find it very difficult to tell if the statement by Lesyer and Tappendorf (2001) is right or not. The author said that the types of strategies that would benefit pupils with special needs, such as adaptations to tests and assignments, cooperative learning groups, and alternative teaching strategies, were the strategies teachers reported using least often. If teachers are not using strategies that benefit pupils with special needs, then no doubt these pupils will not be successful in the general education classroom.

"I have access to teaching and learning materials used in teaching pupils with visual impairments", in response, 10(20%) of the respondents which indicate that they are in agreement with the statement with 38(76%) not agreeing to the statement. In

all, it can be deduced that the situation in Tanzania and Bangladesh are not in isolation because according to according to a study by Gronlund, Lim and Larsson (2010) conducted in two developing countries, namely Tanzania and Bangladesh. The study was on how can assistive technology effectively be used for inclusive education in developing countries? The study came up with findings showing that Tanzania does not have specific policy on inclusive education. Inclusive education is mentioned in some of the policy documents such as disability policy and education and training policy but these policies do not state how inclusive education should be implemented, monitored and evaluated. The study revealed that teaching and learning materials for pupils with special needs are lacking.

The last statement in this series was "I can help pupils with visual impairments to use their assistive devices". In the end it was realized that only 12 of the respondents agreed to the statement, this number represents 24% whiles another 6 (12%) also did not skew to either agree or disagree. However, a bulk majority of 32 of the respondents that represents 64% also indicated that they disagree to the statement. The higher numbers of respondents that disagreed to the statement is an indication that Ocloo and Subbey;s (2008) observation that challenges in the provision of inclusive education are embedded in school aspects such as the schools" physical environment, teachers' training and professional development, class size, curriculum choices available, lack of assistive devices, and teaching materials was true.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This is the final chapter of the study. It presents the summary, findings and recommendations for the study.

5.1 Summary of the study

The purpose of the study was to examine the opinions teachers have about teaching pupils with visual impairments in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana. The study was guided by four research questions. The sampling technique adopted for selecting the participants was the simple random sampling technique. A Likert scale type of questionnaire was used mainly for the data collection exercise.

Data gathered were analyzed using descriptive statements. The main research questions of the study were analyzed question by question in terms of opinions teachers have about teaching pupils with visual impairments in inclusive schools, factors that influences teachers opinions about teaching pupils with visual impairments in inclusive schools, resources available for effective teaching of pupils with visual impairments in inclusive school, as well as challenges teachers face in teaching pupils with visual impairments in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana.

5.2 Summary of Main Findings

1. The study revealed that teachers in the Ada East District of Ghana had negative opinions in areas such as: the belief that pupils with visual impairments could not learn with their sighted peers, it was difficult to teach pupils with visual impairments in the regular classroom, the use of teaching and learning materials in teaching pupils with visual impairment is unrealistic, students with visual impairments are too disruptive during teaching and learning. In most cases teacher's responses indicated that the pupils who are visually impaired were not benefiting from the classroom activities.
2. Again, it was also established that factors such as inadequate training in teaching children with visual impairment, inability of teachers to read braille, low level of experience in teaching pupils with visual impairments, inadequate resources for teaching pupils with visual impairments leads to teachers not able to meet the demands of the visually impaired in the inclusive settings.
3. The study further revealed that there was a problem with the quality and quantity of resources available for the effective teaching of children who are visually impaired in the selected inclusive schools where the study was undertaken. Some of the major challenges identified with the resources include but not limited to the unavailability of embossers, braille sheets, screen access software, note takers, resource room, magnifiers, lens, telescope and reading stands that would ensure smooth teaching and learning in these inclusive schools.
4. The study further revealed some challenges such as teachers not been able to adapt the curriculum to suit the needs of the visually impaired,

unavailability of teaching and learning materials, inability of teachers to explain concepts to the visually impaired and teachers inadequate knowledge on the use of assistive devices meant for the visually impaired prevented them from meeting the adequate needs of the visually impaired

5.3 Conclusion

Firstly, the findings showed that majority of the teachers in the Ada East District of Ghana had negative opinions about the pupils who are visually impaired in the inclusive classrooms. Secondly, it was revealed that all the negative opinions being held by the teachers in the aforementioned district of Ghana were emanated from several factors such as inadequate training of teachers. Thirdly, it came to light that despite the teachers' quest to manage pupils with visual impairments, it was clear that there were inadequate teaching and learning resources in the schools.

Finally, teachers faced a lot of challenges in the dispatch of their duties. These challenges have added to their attitudes towards work. From the findings of the study, it can be concluded that the needs of the pupils with visual impairments are not adequately met.

5.4 Recommendations

The following have been recommended as a way of looking at teacher opinions in teaching children with visual impairments in the regular education setting in the Ada East District of the Greater Accra Region of Ghana.

1. The government should create awareness of issues concerning disability, the talents and abilities of the disabled. This will go a long way to disabuse the minds of people including teachers about the negative opinions they have

about the education of persons with visual impairments in the inclusive schools.

2. The study revealed that majority of the teachers was not having adequate training in the use of assistive devices. As a result of this, it is recommended that the Ghana Education Service should organize in-service trainings for the teachers to ensure that they acquire the requisite skills to manage students with visual impairments in the inclusive setting.
3. It is also recommended that the government must try within its entire means to provide enough teaching and learning resources for the inclusive schools in order that they can use them to teach the students who are visually impaired.
4. There is also the need for the government and other stakeholders to ensure that there is in-service trainings that would go a long way to ensure that teachers in the inclusive schools are given the requisite trainings that would help them to acquire the skills in the manipulation of braille and other resources that would see to the effective teaching and learning in the regular schools where the visually impaired also studies. This will also go a long way to ensure that the teachers are aware of proper ways to explaining abstract concepts to the pupils, the use of braille and other techniques to ensure that the challenges of these teachers are minimized.

5.5 Suggestions for further research

It is suggested that a research is conducted in the area of the persons with visual impairments' attitudes towards attending the regular school settings. This will go a long way to help the teachers to find the necessary processes to motivate the students to adapt quickly to the school

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APPENDIX 1

QUESTIONNAIRES FOR TEACHERS

This questionnaire is designed for research purpose by a Master of education (Special Education) student of Education faculty in the University of Education, Winneba. The purpose of it is to find out your opinions about teaching pupils with visual impairments in the inclusive schools. As a result, the information collected will not be used for any other uses. There are no right or wrong answers. Your cooperation and help is highly appreciated. There are five options to each item in the questionnaire, [strongly agree (SA), agree (A), no idea (NI), disagree (D) and strongly disagree (SD)]. You are kindly requested to choose only one option by ticking (✓) what you agree to.

Teachers' opinions about teaching pupils with visual impairment in inclusive schools

S/N	ITEM	RESPONSES SA	A	NI	D	SD
1	I believe that pupils with visual impairment can learn equally like those with sight					
2	Teaching visually impaired pupils is difficult					
3	I am confident in my ability to teach pupils with visual impairments					
4	It is easy to use TLMS when teaching pupils with visual impairments					
5	Some students with visual impairments are too disruptive during teaching and learning					
6	Students with visual impairments easily understand concepts when concrete materials are used in teaching					
7	It is difficult to motivate students with visual impairments using non-verbal expressions					
8	I believe that teaching students with visual impairments will lead to low performance of the class since its time consuming					

Resources for effective inclusion of students with Visual impairments in inclusive schools

S/N	ITEM	RESPONSES SA	A	NI	D	SD
1	There is ready access to screen access software in my school					
2	Braille embossers are readily available in my school					
3	Note takers are readily available in my school					

4	I have a resource room in my school					
5	A resource teacher is attached to my school to assist the students with visual impairments					
6	Magnifiers, lens and telescope are available in my school					

Challenges teachers face in teaching pupils with visual impairment in inclusive schools

S/N	ITEM	RESPONSES SA	A	NI	D	SD
1	It is easy to explain concepts to students with visual impairments during teaching.					
2	Teaching abstract things to students with visual impairments is quite difficult.					
3	I can read and write braille.					
4	I can adapt the curriculum to suit the needs of the visually impaired during teaching.					
5	I have access to teaching and learning materials used in teaching students with visual impairments.					
6	I can help students with visual impairments to use their assistive devices.					

Factors informing teachers' opinions about teaching pupils with visual impairment.

S/A	ITEM	RESPONSES SA	A	NI	D	SD
1	I have received adequate training in teaching pupils with visual impairments					
2	I can read and write braille					
3	I have been teaching students with visual impairments for more than five years					
4	Teaching pupils with large class size affects the teaching of students with visual impairments.					
5	I have adequate resources for teaching pupils with visual impairments.					
6	Teaching pupils with visual impairments is time consuming.					

APPENDIX 2

UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF EDUCATIONAL STUDIES
DEPARTMENT OF SPECIAL EDUCATION
P. O. Box 25, Winneba, Ghana
+233 (020) 2041069

August 18, 2017

GHANA EDUCATION SERVICE
ADA EAST DISTRICT
P. O. BOX AF 28
ADA. FOAH

Dear Sir/Madam,

LETTER OF INTRODUCTION

I write to introduce to you, Agbenyefia Xorsenyo an M.ED student of the Department of Special Education, University of Education, Winneba with the registration number 7150150001.

She is currently working on her thesis on the topic: *"Perceptions of teachers about teaching children with visual impairment in some selected inclusive schools in the Ada East District of the Greater Accra Region of Ghana."*

I should be grateful if you could give her the needed assistance to enable her to carry out her research work in your school. This forms part of the requirements to complete her programme.

Counting on your cooperation.

Thank you.

Yours faithfully,

ESAU YAO YEKPLE (PHD)
AG. HEAD OF DEPARTMENT

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