UNIVERSITY OF CAPE COAST

CHALLENGES STUDENTS WITH VISUAL IMPAIRMENTS ENCOUNTER IN INCLUSIVE SENIOR HIGH SCHOOLS IN GHANA

JOHN ARTHUR

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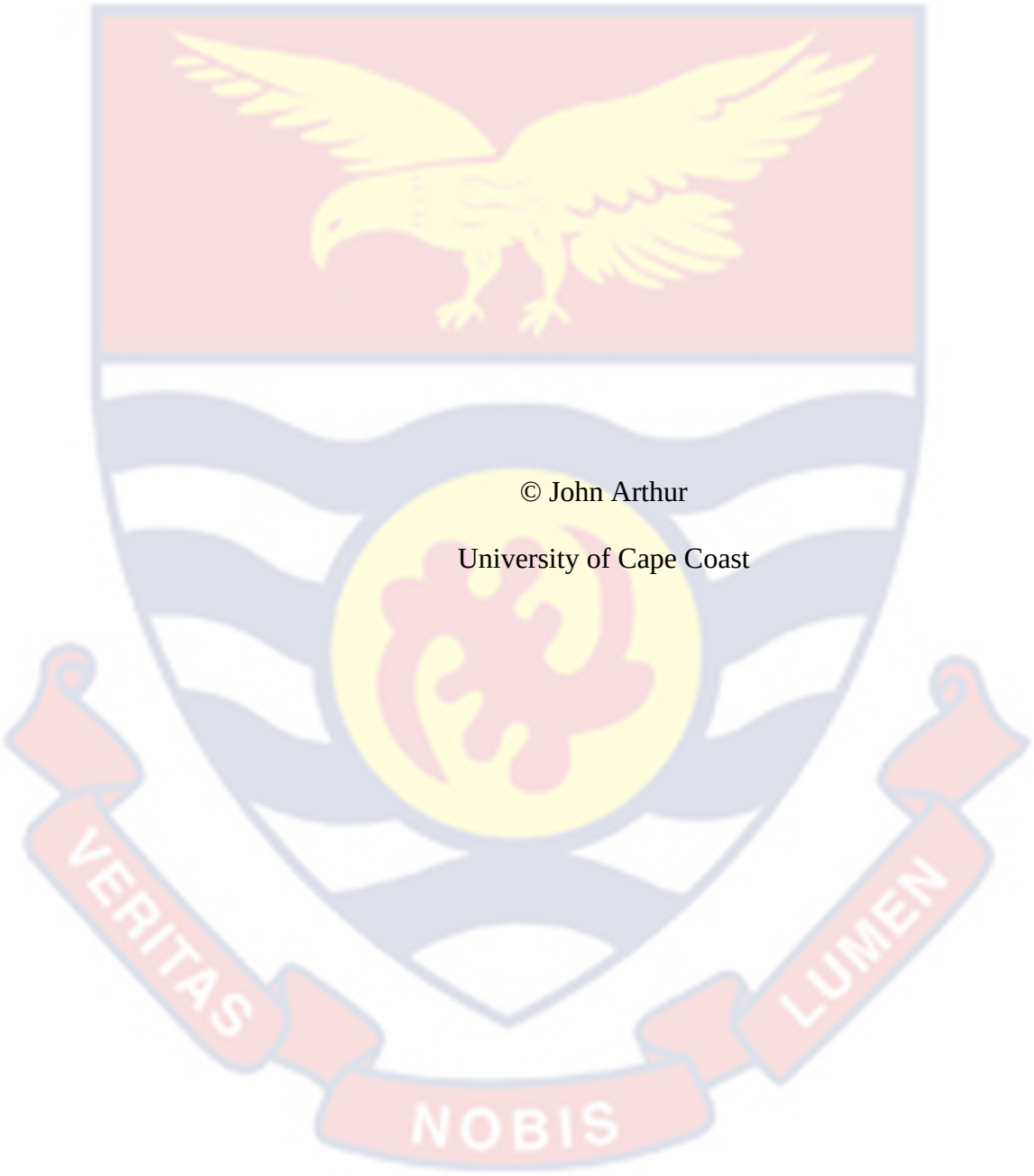

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CHALLENGES STUDENTS WITH VISUAL IMPAIRMENTS ENCOUNTER IN INCLUSIVE SENIOR HIGH SCHOOLS IN GHANA.

BY

JOHN ARTHUR

Thesis submitted to the Department of Education and Psychology of the Faculty of Educational Foundations, College of Education, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Philosophy degree in Special Education

JUNE 2023

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: …….. Date:……...

Name: ……..

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Supervisor's Signature:……. Date:……

Supervisor's Name: …….

ABSTRACT

Issues still prevent the smooth implementation of the inclusive education policy in all schools, even though Ghana has been doing so on a pilot basis since the 2003–2004 school year. This study explored the school challenges facing students with visual impairment (SVI) at Okuapeman Senior High School. A qualitative case study design was used. An interview guide was used to collect the data from 20 participants. The interview data was analysed using thematic analysis by Braun and Clarke (2019). As found in this study, the challenges ranges from academic, social, physical environmental and attitudinal challenges. Particularly for SVI, these challenges hinder them from having access to the physical environment, enjoying socialisation that comes with campus life and negatively impacting their studies due to lack of learning materials. It is recommended that management of the school and parents appeal for financial support from government and benevolent individuals so that they can resource the school resource center with braille materials, computers and other learning materials that SVI need to ease difficulties faced by them in the school.

ACKNOWLEDGEMENTS

My sincere gratitude is extended to my diligent supervisor Dr. Felix Kwame Kumedzro, for his invaluable time and assistance with the writing of this research. I must also express my gratitude for the support and inspiration I have received from my wonderful wife Mrs Comfort Owusua Boabeng and my children, Agabus, Nhyria, Effia, Divine, Nyametease and Elijohn. Last but not least, a sincere thank you to everyone who contributed in various ways, especially the entire Arthur family.

DEDICATION

To my dear wife and children

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CHAPTER ONE

INTRODUCTION

Introduction

In order to guarantee that students with disabilities have their rights recognised and upheld, educational institutions are encouraged by the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2007) to create accommodations for them. In order to excel in their educational endeavours, students with visual impairment (SVI) need to develop adequate orientation on movement in their immediate environment, social competence, technology, braille, other experiences that enhance leisure and entertainment abilities, academic, vocational education, and time management skills (Bishop, 2016). Evidence suggests that many SVIs fail to reach these standards while enrolled in inclusive schools, which affects their academic performance (Lowenfeld, 2015). Even though Ghana has been practising inclusive education since the 2003/2004 academic year, issues still prevent the policy from being implemented successfully in all schools (Opoku, 2021). This study explores the academic, social, attitudinal, and environmental challenges students with visual impairment face at the Okuapemman Senior High School in Eastern Ghana.

Background to the Study

It is difficult to comprehend life without sight as this can be one of the most terrifying human experiences (Hallahan & Kaufmann, 2000). Several international conventions have recognised equitable access to quality education as an essential human right. Despite the importance of education to persons with disabilities, their participation is ineffective (Odame et al., 2021).

Disability is multifaceted and diverse, with different nations giving it different definitions. Disability is defined by the International Classification of Functioning, Disability and Health (ICF) of the World Health Organisation (WHO) as the result of a dynamic interaction between people with impairments and outside influences (WHO, 2001). Visual Impairment (VI) is a physical impairment that makes it difficult for a person to participate fully and effectively in society on an equal level with others. Therefore, those with VI fall under the general concept of people with disabilities (UN General Assembly, 2007). VI affects around 2.2 billion individuals worldwide and is the most common functional disability (Suraweera et al.,2022). A person's quality of life (QoL) can be seriously impacted by VI (Suraweera et al.,2022). Despite these physical limitations that come with the condition, people with VI can be empowered through education in an efficient and long-lasting manner. They might switch from being tax users to being taxpayers as a result. This claim is backed by evidence from the past and scientific findings that show that VI is not an obstacle to successful learning (Spinath, 2021; Suraweera et al., 2022).

According to Spinath (2021), issues with people who are visually impaired are not related to the cognitive domain. Even though a person without the ability to sight faces some difficulties in gathering and disseminating information, with the correct resources and assistance, he or she can learn through the other four senses (Spinath, 2021). Therefore, if the individual is given the proper academic setting and assistive technology, he or she can compete on an equal basis with their sighted counterparts.

In an educational situation, visual sight is significant for students' and teachers' learning, mobility, social growth, and adjustment (Omede, 2015). All these functions can be hampered by VI (Abodunrin, Abodunrin, & Lawal, 2022). Improving access to school for students with disabilities, especially those with physical disabilities, could be a way to break poverty cycles (Lieberman et al., 2014). Unfortunately, many South Saharan African countries' education systems are plagued by poor facilities, underpaid and undertrained teachers, and many other problems (Lawal, 2022; Lieberman et al., 2014 & Omede, 2015). The Salamanca Statement, which emerged from the World Conference on Special Education in June 1994, called upon countries to adopt inclusive education in matters of law and policy to provide equality of opportunity for children, youth and adults with disabilities in primary, secondary and tertiary education (Ainscow, Booth, & Dyson, 2006; Anthony, 2017). The provision of universal access to education is one of the objectives of the Sustainable Development Goals, which seeks to achieve high-quality education by 2030. As early as the 1970s, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) suggested that developing nations adopt inclusive education as a practical substitute for educating children with disabilities amid continuous global discussions over the best type of education (Abodunrin et al., 2022). Because of this, interest in inclusive education has increased (Lamichhane, 2017; Abodunrin et al., 2022).

Despite these commitments and developments on a global scale, comprehensive and inclusive education for individuals with disabilities has not yet been accomplished, particularly in developing nations (Lamichhane, 2017). Even though all community members must work together and

constructively to promote and execute inclusive education, most developing nations consider its implementation to be as simple as just including students with disabilities in regular classes with their counterparts without impairments or disabilities (Lamichhane, 2017). International organisations such as UNESCO (1994) have advocated for adopting an inclusive education strategy, which involves reformulating mainstream classrooms to accommodate all learners, with disabilities or not. While there has been significant incorporation of components of inclusion into national policies in Sub-Saharan African (SSA) Countries, there is still a shortage of education that is truly sensitive to the realities of persons with disabilities (Lieberman et al., 2014; Abodunrin et al., 2022, & Omede, 2015) Indeed, many of the challenges above, including human resources and infrastructure deficits are impeding SSA nations' ability to serve and give the best of education to students with disabilities.

Inclusive education is a concept for achieving equity, fairness, and excellent education for all children, particularly those who have traditionally been marginalised from regular school due to disabilities or other characteristics. Inclusion education was a lifesaver in implementing educational and psychosocial services for people with VI. According to UNESCO's (2005) definition of inclusive education, this type of education aims to meet the various needs of all students by boosting leadership engagement and lowering exclusion rates. This implies that every child has an equal right to a high-quality education that meets their specific needs. Inclusive education supports all learners to learn, contribute, and engage in all facets of school life at their local neighbourhood schools in age-appropriate,

regular classrooms (Abdul et al., 2019). Internationally, inclusive education is acknowledged as a philosophy that aims to achieve equity, justice, and equality for all students, especially those who have previously been excluded from education due to disabilities (Christopher & Elizabeth, 2012).

The emphasis on fulfilling the needs of the students rather than forcing them to conform to the current system is at the heart of inclusive education. In this vein, it has been suggested that stakeholders in education should bring services to students and individualise them to their specific needs (Ajuwon, 2008). Furthermore, Ferguson (2008) argues that rather than didactically imparting knowledge to students, educators should strive to give learning help and accommodations. Countries in SSA have had mixed success despite a rising worldwide consensus on the importance of implementing inclusive education. Eleweke and Rodda (2002) identify several challenges in developing countries when it comes to education for students with disabilities, including a lack of facilities and educational materials, the absence of early childhood special education programmes, an urban bias in service provision, a shortage of adequately trained professionals, and poor infrastructure among others. Special needs schooling is considered expensive and unimportant, and governments are unable to be held fully accountable if they fail to provide the required services for people with disabilities due to a lack of legal support (Eleweke & Rodda, 2002).

These concerns are inherent to general education provision, and students with disabilities are disproportionately affected due to their existing marginalised situation. In Ghana, following the introduction of the community-based rehabilitation programme in 1992, which piloted inclusive

education in selected districts, several educational policies have been enacted to establish inclusive education in Ghana. The 1992 Constitution, which mandates free, universal, and secondary education; the National Disability Act, 2006; and the Ministry of Education Strategic Plan (2010–2020) are among the legislative and policy frameworks that support inclusive education (Nketsia & Saloviita, 2013). According to the policy, the Ghana Education Service's Special Education Division must provide equal educational opportunities for individuals with special needs. These policy guidelines guide the schools, such as the schools chosen for this study, in their efforts to offer all students, including those with disabilities, equal educational opportunities.

Ghana has been implementing inclusive education on a pilot basis since the 2003/2004 academic year. As of 2015, over 2000 schools were practising inclusive education in 48 districts across the ten regions of Ghana (Ministry of Education, 2015). Teachers working in inclusive schools receive training to help them develop their ability to work with pupils or students with disabilities (Asamoah et al., 2018). Research done in Ghana on inclusive tertiary education for students with VI has highlighted some challenges students with VI face in accessing higher education in Ghana (Ampong, 2001; Mamah et al., 2011; Quist & Ntim, 2004; Poku, 2011). For instance, despite positive opinions about including students with VI in Ghana's public universities, it has also been found that some university professors lack the skills and knowledge necessary to teach these students effectively (Mamah et al., 2011). As a result, VI students are not accommodated by the teaching methodologies used by professors in the various postsecondary institutions,

and some lecturers appear unaware of their presence in the classroom (Mamah et al., 2011).

Inadequate lighting and crowded lecture halls also provide difficulties for VI students in attending and understanding lectures (Ampong, 2001; Poku, 2011). Other empirical investigations have discovered that VI students have obstacles in all facets of life, including the change from school to job (Odame et al., 2021). These challenges may also include hostile school or home environmental settings, a lack of flexible teaching and learning resources at school, and hostility toward them from non-disabled students and teachers (Hadidi & Al-Khateeb, 2013; Lamichhane, 2017; Lourens & Swartz, 2016; Stevelink, Malcolm, & Fear, 2015). These challenges may affect their academic performance and prevent them from achieving academic success (Dorleku, Kwashie, & Rockson, 2019). Higher levels of education favourably impact a person's quality of life, which is seen in better employment opportunities and increased income (Edgerton, Roberts & Below (2012). This claim is valid for people with VI, as education and training help them to earn reputable jobs and contribute to the nation's development. Numerous persons with various disabilities who were thought to be a burden on national economies were barred from society since they did not significantly contribute to it (Wickramaarachchi et al., 2021).

People with VI continue to face severe challenges in many ways in their aspirations to achieve their academic goals. Some of these challenges include mobility, psychological, social, and economic issues (Suraweera et al., 2021). While these factors affect the quality of life, promoting inclusive education in the proper academic setting is significant in raising the quality of

life (Suraweera & Dunuwila, 2019). With the implementation of inclusion of students with VI and other forms of disabilities in inclusive schools still at the initial face in Ghana, it is therefore essential that more research studies are done on inclusive education to provide data to government and policymakers to help improve it.

In Ghana, most teachers in the Northern, Ashanti, and Central Regions think that hearing and visually impaired students should be put in special schools because they find it challenging to teach such students in the general classroom (Gyimah, Sugden & Pearson, 2009). Inaccessible programmes and unfriendly physical environments, financial hardship, inadequate learning materials and lecturers' negative attitudes towards graduate students with VI were found to be some challenges facing graduate students with disabilities (Odame et al., 2021). These challenges have negative impacts on the education of students with disabilities and affect their transition into tertiary institutions. Also, since the implementation of inclusive education started, very little is known in the literature about the academic, attitudinal, social and physical environmental impediments of students with VI inclusive senior high schools.

Statement of the Problem

The education of students with disabilities is strongly emphasised in the Sustainable Development Goal (SDG) and its 17 targets. While the education of individuals with disabilities has seen significant advancements in the developed countries, there is still more work to be done in the South-Saharan Countries about educating individuals with special educational needs and disabilities (Simui et al., 2018). The United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2007) encourages

educational institutions to make provisions to accommodate people with disabilities in educational settings to ensure their rights are recognised and respected. This accommodation includes suitable institutional or environmental changes that allow people with disabilities to exercise their fundamental rights and liberties on an equal footing with those who do not have disabilities (Odame et al., 2021). This call from the UN for governments to make educational provisions for persons with disabilities led to the birthing of inclusive education worldwide.

However, since the implementation of inclusive education started in Ghana in the 2003/2004 academic year, it has been met with numerous challenges that are affecting the academic progress of the very students with disabilities that the inclusive education sought to benefit (Asamoah, Hau-lin Tam, & Abdullah, 2022). Challenges such as limited educational materials, human resources, and infrastructure deficits have been found to impede the smooth running of inclusive education (Lieberman et al., 2014; Lawal, 2022 & Omede, 2015). In Ghana, some studies have been done to explore the challenges students with VI face. However, these studies tend to focus on VI students in tertiary institutions or those in Special schools like Akwapim School for the Blind. For example, studies have identified various impediments to including students with disabilities (Opoku et al., 2017; Opoku et al., 2015).

These include the need for teaching and learning materials, resources and qualified teachers (Anthony, 2011; Gregorius, 2016; Nketsia & Saloviita, 2013). Vanderpuye, Nyame and Okai (2022) also found the physical environment, the inordinate attitude of some members of the University

community and unsupportive academic arrangements at the university as challenges faced by students with VI at the University of Cape Coast. Inadequate lighting and crowded lecture halls also provide difficulties for VI students in attending and understanding lectures (Ampong, 2001; Poku, 2011). Other empirical investigations have discovered that VI students have obstacles in all facets of life, including the change from school to job (Odame et al., 2021). These challenges affect the academic performance of students with VI (Dorleku et al., 2019) and quality of life (Suraweera et al., 2021).

While the above studies helped us know the challenges faced by students with VI, they tend to focus on students with VI in special schools and tertiary institutions. There seems to be an apparent lack of literature in the Ghanaian context on the challenges of students with VI in inclusive senior high schools in Ghana. With my personal experience at Okuapemman Senior High School, records I intercepted from the head of the academic's office indicated that from 2018 to 2020, many students with VI did not perform well in their academic work compared to their sighted peers. The record shows that the performance of students with VI in the West Africa Senior Certificate Examination (WASSCE) has decreased in recent years. Social, attitudinal and physical environmental challenges can also hamper academic success. Students with VI will likely be confronted with barriers that limit their social participation, especially regarding access to school facilities (Landsberg et al., 2013). The educational environment can be a barrier for students with VI if the environment is not designed for their specific needs (Opie, 2018).

Inclusive, highly visual education environments do not support students with VI (Opie, 2018). To ensure success in academic attainment,

students with VI need to receive appropriate orientation and mobility; social skills; technology; braille; independent living skills; recreation and leisure skills; postsecondary and career education; use of remaining sight; and organisational skills (American Foundation for the Blind cited in (Jones et al., 2012; Bishop, 2016). There is evidence that many young people with VI miss these qualifiers in inclusive school settings, which affects their school performance (Lowenfeld, 2015). Social and Attitudinal challenges continue to affect students with VI. Studies in Saudi Arabia and the United States of America have shown that some students without disabilities do not like the idea of inclusive education because they feel that students with special education needs would not be able to keep up with lessons taught in class (Dare, Nowicki, & Felimban, 2017; Downing & Peckham-Hardin, 2007).

There is, therefore, the need to explore the experiences of students with VI in senior high inclusive schools to discover the social, attitudinal, physical, environmental and academic factors that impede their full inclusion and academic factors that affect their inclusion at the school. Because senior high school education serves as a pivotal point in the educational attainment and criteria for accessing tertiary education in Ghana, studies must be carried out to identify and address these challenges.

Purpose of the Study

The study aims to explore the academic, social, attitudinal, and environmental challenges students with visual impairment face in the Okuapemman Senior High School in the Eastern Region of Ghana.

Objectives of the Study

The following objectives guided the study.

1. To find out the academic challenges students with visual impairment face in Okuapemman Senior High School.
2. To find out the social challenges students with visual impairment face in Okuapemman Senior High School.
3. To find out the environmental challenges of students with visual impairment face at Okuapemman Senior High School.
4. To find out the attitudinal challenges students with visual impairment face in Okuapemman Senior High School.

Research Questions

The following research questions were formulated to guide the study.

1. What academic challenges do students with visual impairment face at Okuapemman Senior High School?
2. What social challenges do students with visual impairment face at Okuapemman Senior High School?
3. What are the environmental challenges of students with visual impairment face in Okuapemman Senior High School?
4. What are the attitudinal challenges students with visual impairment face at Okuapemman Senior High School?

Significance of the Study

This study holds immense significance for various stakeholders within Ghana's educational sector and beyond. The study will provide essential data that can guide the formulation of educational policies regarding the inclusion of students VI in senior high schools in Ghana. By establishing a foundation

based on empirical evidence, future policies can be more effective and targeted, addressing the specific needs of these students. Secondly, professionals in the field of special education, rehabilitation, and disability studies, as well as individuals with VI in the Akuapem North Municipality, will benefit from increased awareness of the challenges faced by students with VI. This awareness extends to the general public, fostering understanding and support for inclusive education, thereby creating a more supportive environment for these students. Thirdly, understanding the challenges faced by students with VI will enable stakeholders to identify and implement strategies to address these challenges effectively. This can lead to the creation of more conducive learning environments that cater to the diverse needs of students with VI, ultimately promoting their inclusion in the educational system.

Again, the findings of this study will be instrumental in shaping inclusive education programmes that specifically cater to the needs of learners with VI. By tailoring programmes based on concrete research outcomes, educational planners can design initiatives that better support these students in their academic journeys. Beyond policy and programmes, the study aims to influence attitudes. By showcasing the challenges faced by students with VI, it aims to foster a positive change in the attitudes of administrators, teachers, students in primary, senior high, and tertiary schools, as well as the broader community. This shift in perception is crucial for building a genuinely inclusive society that accepts and supports individuals with VI. Lastly, the study's findings will add valuable insights to the existing body of knowledge in special education, specifically within the realm of inclusive education for students with VI. This contribution will enrich the literature and potentially

guide further research in this area, advancing the understanding and practices related to inclusive education.

Delimitation

The study was delimited to students with VI, teachers who teach the students with VI, and some non-teaching staff in the school were included in the study. These groups were chosen for the study because they spend the most time with the students and would be in a better position to give information about the challenges they face in the school. In terms of variables, the study explored the academic, social, attitudinal and physical environmental impediments students with VI face in inclusive senior high schools. The study considers these variables because, these variables play an important role in the successful inclusion of students with VI in schools. This study did not consider variables such as stigma associated with VI and parental involvement.

Limitations

As with qualitative studies, the researcher's views, beliefs and personal opinions are a threat that can influence his interpretation and analysis of the results. I was very cautious and objective in analysing and interpreting the results to ensure they were in their purest form, unadulterated or influenced by my personal views.

Organisation of the Study

The work is organised into five chapters. The first chapter comprises the background to the study, statement of the problem, purpose of the study, research questions, significance of the study, delimitation and limitations and organisation of the study. The second chapter covers the study's theoretical,

conceptual and empirical framework. The third chapter contained the research methods. Analysis and discussion of results were in chapter four, while the concluding chapter dealt with summary, conclusion, recommendations, and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter examines the literature about the research. Abstracts, books, journal articles, online publications, and published theses by past students were used to acquire information for this research. The chapter is organised under the following themes and sub-themes.

1. Theoretical Framework
2. Sociocultural Theory (Vygotsky, 1978)
3. Conceptual Review
4. Concept of Inclusive Education
5. Learning Environment for Learners with Visual Impairments
6. Concept of Visual Impairment
7. Empirical Reviews
8. Social challenges of students with visual impairments
9. Academic challenges Students with visual impairments face.
10. Attitudinal challenges students with Visual Impairments face.
11. Physical environment challenges Students with Visual Impairment face.
12. Summary of Literature Review

Theoretical Framework

This section reviews the theories underpinning the study. The Sociocultural Theory (Vygotsky, 1978) was reviewed in this section.

Sociocultural Theory

Lev Vygotsky is the originator of social-cultural theory. He created a new framework for conceptualising educational discourses by which learners obtain multiple approaches to knowledge transfer and addressing issues, according to Kozulin (2003). The theory emphasises how the socialisation of children, guidance of adults and contribution of society influence cognitive development in children. Vygotsky (1978) implied that human learning is primarily a social process and that our cognitive abilities are established via encounters with others who are more experienced than we are. According to the sociocultural theory (Vygotsky, 1978), our human psychological and intellectual development is influenced, in part, by other individuals in our lives who are in mentor-type positions, such as parents and teachers. In many instances, our contacts with others in social groups or our participation in cultural activities shape our values and ideas. In addition to focusing on how mentors and peers affect individual learning, sociocultural theory also considers how societal values and attitudes impact the learning process.

According to Vygotsky (1978), children's cognitive development can be aided by explaining the cultural significance of events and items and helping them with a difficult task. According to social-cultural theory, society and culture are the primary determinants of a child's development. The claim is that social engagement is the primary way that children develop. Second, a child's development results from the knowledge, abilities, and experiences he or she has gained through social interaction with those around him or her. The fundamental tenet of Vygotsky's theory is that because mental processes are

adaptive, all uniquely human higher mental development forms begin from shared social and cultural circumstances (Trawick-Smith & Dziurgot, 2011).

Additionally, the first stage of development, where action and voice convey meaning, occurs during the acquisition of language and comprehension, which is influenced by culture and those around us. Culture is passed on through language. Language and communication are, therefore, based on the sign system (Baker, 2015). The Zone of Proximal Development (ZPD) is a concept in the theory. Vygotsky defined this as the gap between the level of actual development of the learner as determined by autonomous problem-solving and the level of potential development as determined by problem-solving under adult guidance or in collaboration with more capable peers. Essentially, it consists of all the knowledge and abilities that someone can gain with direction but still needs to acquire or cannot accomplish independently. Children can gradually expand this zone when they can frequently challenge their abilities and knowledge by watching someone more experienced.

According to Vygotsky's sociocultural theory of learning, people learn through social interactions. It is one of the most prevalent philosophies of education in use today. It holds that social interaction is the primary means of learning, followed by an individual's internalisation of social norms. According to sociocultural theorists, interactions between students and teachers in the classroom aid in student learning. The connections promote social interaction and active engagement in the learning activities. Students learn by listening, discussing, and observing as they complete activities. As explained above, sociocultural theory shows that learning and development are

not only processes of increased mental complexity but are also mediated by social and cultural interactions. In addition, according to Bates (2019), the sociocultural theory constructs knowledge and interactions through social interactions with family, friends, teachers, and peers. The sociocultural theory serves as the foundation for this study because Vygotsky's theory gave us a basis for how learning and intellectual development are acquired through socialisation, the guidance of adults and the contribution of society; it gives an idea about how students with VI can learn in their school environment through the social interaction and guidance from their peers, teachers and administers in the school.

According to the theory, a good social environment is needed for smooth cognitive development in children. The study looks at some hindrances in the inclusive school environment that may negatively affect students with VI's learning and academic performance. According to Vygotsky, impairment causes all behavioural systems to be replaced, as well as a rearrangement of social interactions. The main issue with disabilities is their societal repercussions and their effect on social interactions (Kozulin & Gindis, 2007). Vygotsky advocated for inclusion based on positive differentiation because, in an inclusive school setting, students with VI and other types of disabilities can learn from peers who are not disabled (Kozulin & Gindis, 2007). This will propel their cognitive development through social learning and ZPD. Vygotsky's concept of the Zone of Proximal Development and Wang's (2009) interpretation both hold that it is crucial to understand what a person with disabilities is capable of doing and how society can help them to develop.

Although these persons with disabilities may have weaknesses in some areas, they also have strengths that can demonstrate additional abilities. Vygotsky's (1978) theoretical recommendations suggest that involvement with and education of students with VI should be planned in the context of many opportunities and activities to socialise with others to stimulate their language and cognition development. According to Lev Vygotsky's approach, special education teachers should not confine themselves to the classroom but rather collaborate with other professionals in the field, learn from one another, and strive toward a shared ideal goal. This theory can be applied to educating students with VI in inclusive. Regarding inclusive schools, because social interaction is an important concept in theory, visually impaired students require this kind of support from their teachers and classmates to learn and take part in their education to overcome the challenges they encounter.

Additionally, educators and sighted students must work together to help students with VI learn and encourage them to participate in extracurricular activities like playing and games. What a young person can do now in cooperation with another person can do tomorrow independently (Vygotsky et al., 1987). Guidance or mediation is another facet of social culture theory. Vygotsky defined mediation as an important role for people in learners' lives. Furthermore, Vygotsky (1978) asserts that social interaction between two or more persons who possess varying degrees of knowledge and skill is the key to effective learning. This entails assisting students in progressing through the subsequent knowledge or understanding layer.

Feuerstein and Feuerstein (2005) asserted the same thing, arguing that an effort by adults to modify and adapt the environment in a way that will be

beneficial to the students (as cited in Mbukwa, 2009). Learning settings must be modified as part of inclusive education to make learners with vision impairments comfortable. According to Vygotsky's theory, a child must engage with the environment to develop higher mental processes (Kozulin, 2003). Children with visual impairments are also thought to benefit from mediation because they require adaptable environments. Following this line of reasoning, Trawick-Smith and Dziurgot (2011) contend that, in Vygotsky's view, a child's primary classroom activities are interactions with the written materials, either by the author or other students.

Additionally, directed participation is the process by which young people voluntarily pick up new abilities and capacities for problem-solving through their involvement in significant activities with the assistance of parents, adults, or other more knowledgeable friends. Guided participation highlights the child's active role in learning and cognitive development and the supportive, helpful, and guiding roles that parents and other loving persons can play in tandem with the growth of the child's mind. Support encompasses overt verbal and nonverbal communication through the layout and structuring of guidance and more subtle relationships between kids and their surroundings.

Conceptual Review

The concepts in the study are reviewed in this section.

Concept of Inclusive Education

Inclusive education aims to provide an educational environment in which learners feel comfortable and confident to study and develop to their full potential. Initial debates about inclusion, according to Ferguson (2008),

were related to social equality discourse, in which advocates sought for students with disabilities the status of any minority group that was widely disenfranchised and discriminated against in order to guarantee access to regular classes. Ajuwon (2008) defines inclusive education as the theory and practice of educating children with disabilities in general education settings. While inclusive education is often linked with students with disabilities, a variety of definitions cover a wide range of target demographics (Ainscow, Booth & Dyson, 2006). For example, the Salamanca Statement of 1994 emphasises that inclusion should aim to benefit all marginalised groups and account for intersectional deprivations that limit students' educational success (Miles & Singal, 2010). While an inclusive strategy has the potential to help a wide range of social groups, the majority of the debates focus on students with impairments. Because it was a product of the World Conference on Special Needs Education, Miles and Singal contend that the Salamanca Statement inherently links inclusion to people with disabilities.

Inclusive education is a concept for achieving equity, fairness, and excellent education for all children, particularly those traditionally marginalised from regular school due to disabilities or other characteristics. Inclusion education was a lifesaver in implementing educational and psychosocial services for people with VI. According to UNESCO (2005), cited in Opertti, Walker and Zhang's (2014) definition of inclusive education, this type of education aims to meet the various needs of all students by boosting leadership engagement and lowering exclusion rates. This implies that every child has an equal right to a high-quality education that meets their needs. Inclusive education supports all learners to learn, contribute, and

engage in all facets of school life at their local neighbourhood schools in age-appropriate, regular classrooms (Abdul et al., 2019).

Internationally, inclusive education is acknowledged as a philosophy that aims to achieve equity, justice, and equality for all students, especially those previously excluded from education due to disabilities (Christopher & Elizabeth, 2012). Inclusive education is still a relatively new approach to teaching in the world. Even though it has evolved quickly in wealthy nations, this educational approach still needs to be implemented in third-world nations. However, depending on the society's nature and economic, social, political, and technical development levels, the difficulties vary in form and severity (Kiomoka, 2014). For instance, Zwald (2008) researched itinerant teachers' opinions of the value of physical activity for students with VI and its effects on social interactions and academic progress in the United States of America (USA). According to the study, VI learner's physical exercise is crucial because a lack of it might make it difficult for them to learn, participate in class activities, and even maintain healthy social relationships. Javakshishvili (2012) sought to define teachers' social inclusion practices in Georgian schools in a different study. The research found that the concept of inclusive education was a term the teachers were unfamiliar with. It was further discovered that there needed to be more understanding of social inclusion.

Similarly, Zulch and Knouwds, (2010) researched Namibia to investigate and describe how students with VI are incorporated into a Namibian mainstream school. The results demonstrated that students with VI were involved academically and physically. The investigation also revealed that there needed to be more instructional materials and that the school

grounds and surrounding physical environment did not serve the needs of the visually impaired students. There needed to be more community support, training, and collaboration between teachers, parents, and the community. Additionally, the results showed that some professors and sighted students still had unfavourable attitudes toward blind and partially sighted students.

Moreover, there was no explicit policy on how to implement inclusive education. In addition, Igune (2009) did a study that looked at teachers' perspectives on including blind students, the variables that might affect those perspectives, and what they believed could have been done to improve things. According to the research, educators thought that visually impaired students needed assistance to engage in classroom activities. However, Najjingo (2009) researched the difficulties faced by children with impairments in accessing services for all-inclusive schooling (CWDs). According to the findings, learners with disabilities are still affected by social-cultural issues like peers' and teachers' negative attitudes, crowded classrooms, poverty in the home, unfavourable policy environments, and unsatisfactory stakeholder participation in policy formulation. A shortage of competent teachers, subpar facilities, and a lack of awareness of inclusion among students and parents are still issues for inclusive education (Kiomoka, 2014).

Learning Environment for Learners with Visual Impairments

Environmental elements, such as lighting, listening conditions, decorations, and room configurations, can impact all children, especially children with VI. In inclusive schools, a positive and nurturing learning atmosphere is crucial for learning. The physical space in which learning takes place is known as the learning environment. An inclusive learning

environment accepts all students and gives them the time and resources they need to succeed. The researcher in this study considered the definition of learning provided by Peterson and Hattie (2010), who define the learning environment as consisting of three aspects: The classroom, the school grounds, the school building, and the neighbourhood all fall under this category. The third factor, the neighbourhood around the school, is addressed in the section on the social environment for visually impaired children, but it needs to be considered here. The building of the school and the ground There are distinct difficulties for visually impaired students to navigate throughout the building. The structure and play areas of inclusive schools should consider each student's requirements. For instance, accessible restrooms, clear routes, stairways, and building signage should help learners with disabilities, especially those who are visually impaired.

Additionally, it is crucial to examine every room used by students with visual impairments for potential hazards and to acquaint them as quickly as possible with the school's surroundings (Susan et al., 2003). The inclusive classrooms are designed to be spacious, with room for all students. Learning softly is made possible for students with visual impairments, according to Morny (2016), through adapting the listening environment, well-designed lessons, and employing various tactics. Additionally, students with VI (poor vision) should be seated in the front of the class where they can easily access the teacher and the chalkboard. They should have adequate educational tools, including talking books, Braille textbooks, Braille writers, Perkins Braille machines, computers, and talking calculators. Palmer (2005) emphasised the importance of adapting teaching methods, providing learning materials and

other helpful technology, and maintaining strong classroom management. This is related to Universal Design for Learning (UDL), a set of guidelines and strategies teachers utilise in the classroom while also being inventive when creating educational materials (Courey et al., 2013). This suggests that a learning environment that accepts all students regardless of their particular differences is crucial.

The learning environment should be planned so all students may participate in educational activities with a flexible curriculum considering their varied backgrounds, cultures, learning styles, and skills. A teacher can prepare a lesson to fulfil the needs of all students in an inclusive classroom based on the UDL's three guiding principles of representation, action and expression, and engagement (Courey et al., 2013). To satisfy the requirements of varied learners, representation in this context refers to several representations of the same subject in various ways. For instance, the instruction for students with VI can be delivered through touching, audio reading, and vocal explanation. Multiple representations of the lesson are encouraged by UDL since they promote better comprehension of the idea and increase participation from more students (Mcguire, Scott, & Shaw, 2006). Action and expression, on the other hand, relate to many communication strategies that students employ to express what they have learned. Examples include student presentations in class, storytelling, and other methods. Engagement refers to teachers' strategies to inspire students' interest in participating in their lessons by being imaginative, practical, and similar methods (Courey et al., 2013).

Concept of Visual Impairment

Visual Impairment (VI) is a broad terminology encompassing a wide range of visual conditions. It is a term that encompasses total blindness and moderate and severe conditions. Because each learner's visual efficiency is unique, the educational definition of visual impairment stresses functional visual efficiency. The educator's primary concern is the learner's use of residual vision. Visual impairment arises when the peripheral field of vision is significantly reduced (Leonard Cheshire Disability, 2011). VI are physical impairments that make it difficult for a person to participate fully and effectively in society on an equal level with others. Therefore, those with VI fall under the general concept of people with disabilities (UN General Assembly, 2007). VI affects around 2.2 billion individuals worldwide and is the most common functional disability (Suraweera et al..,2022). In an educational situation, vision is critical. A visual handicap is a visual impairment severe enough to obstruct progress in conventional educational programmes. Some learners with mild VI can see well, focus on objects far and near, coordinate hand and eye movements, detect little changes, and recall what they see with the help of corrective glasses. VI educational descriptions can include the following (Yao & Prosper, 2011): Total blindness (severe disability) means that the individual receives no usable information via their eyes and must rely on their touch and aural senses to learn.

Students who are functionally blind learn primarily through other senses but may be able to complement knowledge received through other senses with vision. To learn to read, they would have to utilise Braille. Visual field and visual activity tests cannot be used to assess functional vision. Low-

vision students learn primarily through vision and with the use of magnification gadgets. They might be able to learn to read (with minor to moderate impairment). The term "visual efficiency" relates to how effectively a person uses whatever vision he or she has. This includes managing eye motions and paying attention to minor details to distinguish things from their surroundings (Yao & Prosper, 2011). The degree of VI, age of onset, cognitive development, linguistic development, motor and mobility development, and social and emotional development all influence the characteristics of children with visual impairment (Chokron, & Dutton, 2023).

Persons with VI, on the other hand, have educational features. These features are dependent on a learner's level of visual efficiency. Visually impaired students exhibit the following characteristics: Cognitive abilities are comparable to sighted peers. They cannot use their vision to aid in forming ideas. Their ability to generate notions is based on their physical experience (Yao & Prosper, 2011). They are unable to communicate using visual imagery. They may exhibit stereotyped activity, such as rocking or wiping their eyes. They are reclusive, reliant, and unable to read nonverbal clues (Mboshi (2018). They struggle with spatial information, visual imaging, and imagery issues that have functional repercussions.

While reading or doing close work, they exhibit atypical facial behaviours such as squinting, blinking, or frowning (Mboshi, 2018). They have trouble locating and picking up little objects. Physical signs include inflamed eyes and puffy eyelids. Watery or discharged eyes, unevenly seized eyes, drooping eyelids, and crusts on the lids between the eyelashes are all signs of a seized eye (Mboshi, 2018). They can have a problem with eye-hand

coordination. They have difficulty identifying similar-shaped letters, numerals, or words, such as b and d. They have difficulties writing within the lines or are unable to do so. They struggle to read books within the typical range, causing them to bring the book/object closer to their eyes. Some students may squint or close their eyes in response to intense light. They may struggle to see in low light or be unable to see in complete darkness (Mboshi, 2018).

Review of Empirical Studies

Empirical studies conducted in relation to the objectives of the study are reviewed in this section.

Social challenges of students with visual impairments

Meeting students' socio-emotional needs with VI is essential to help them develop social and academic skills, thereby increasing their possibilities of being successfully included in school activities. A healthy socio-emotional development, a sense of well-being, and good social competence are necessary for students to be prepared to learn and master different tasks and situations in school (Dix et al., 2012; Roe, 2008). For students with disabilities, it is essential to participate in friendships involving reciprocity and mutual identification to develop complete social competence (Roe, 2008).

Several studies have found that students with VI have fewer peer relationships, either in or out of school, than their sighted peers, resulting in fewer chances to develop social skills (Cochrane, Lamoureux, & Keeffe, 2008; Huure & Aro, 2000). Furthermore, contextual factors such as lack of access to school and activities, negative attitudes from peers and teachers, and an absence of appropriate peer feedback may make social inclusion more difficult (Roe, 2008).

De Verdier (2016) conducted a longitudinal study that examined psychological well-being and social relations in school for six students with VI in Swedish inclusive education. There were four girls and three boys from different parts of Sweden. Four were blind, and three had severe VI. The students were followed through compulsory school, with data collection in Grades 1, 2, 3, and 9. 151 interviews were conducted with the students, teachers, and parents during these years. At the end of ninth grade, the Strengths and Difficulties Questionnaire (SDQ) was also administered to all informants. The study showed that most students were stressed about school work and keeping up with their sighted peers and described feelings of loneliness. Some displayed emotional symptoms of which parents and teachers were not aware. Three students had additional disabilities besides their VI. These students reported more overt psycho-social problems than the students with only VI. The students developed different strategies to handle the social challenges, for example, focusing on school work and getting good grades or withdrawing and seeking friends with VI outside school.

Spungin and Ferrell (2013) discovered that children will form connections and friendship bonds as a consequence of their classroom participation and that these friendships will serve as natural supports for them as they grow into adulthood. The quantity and kinds of friendships available to pupils with special needs in segregated classes are restricted (Spungin & Ferrell, 2013). Placement in general school settings, on the other hand, does not ensure reciprocal social interactions (Spungin & Ferrell, 2013). Even in an inclusive classroom, research has demonstrated that without sufficient assistance, the advantages of social engagement and friendships are not

guaranteed for pupils with disabilities (Russell, 2013). Students with special needs of all severity levels form more meaningful connections when they are involved with appropriate assistance (Morris, 2017). As pupils enter adolescence, peer connections are regarded as one of the most critical developmental outcomes (Morris, 2017).

According to a study conducted by Lazarus, Daniels, and Engelbrecht (2018) to find out how students with VI are socially included in inclusive schools in South Africa's mainstream education system, the results suggest that visually impaired students do not engage in a wide variety of play behaviours and have poor social interaction skills. This affects their abilities to form social connections with their peers, teachers and sometimes family members (Lazarus et al., 2018).

According to Katz and Mirenda (2012), teachers perform one of the most significant roles in adopting and sustaining the social inclusion of students with VI in inclusive schools. This is because they are in constant touch with the pupils and engage with them regularly. Similarly, Lewis and Collis (2017) conducted a study on inclusive education in Knoxville, USA, to compare the social studies instruction students in the fifth grade received using traditional and technologically based methods. They found in their study that teachers of learners with special educational needs can play a crucial role in their social inclusion by ensuring that pupils without disabilities relate well and have a companionly, cordial connection with those with special needs. Lewis and Collis (2017) added that such teachers have to be sensitive to the particular needs of individual learners and the attitudes and feelings of those

without impairments. Teachers must get a critical knowledge of disability stereotypes and biases and consider how they have impacted their pupils.

Swart (2015) conducted a study to investigate the difficulties faced by students with vision impairment in two mainstream schools in Klerksdorp in South Africa; he found that the inclusion of pupils with disabilities in the regular classroom and their successful acceptance by their peers are the functions of the classroom teacher when he or she orchestrates an excellent social atmosphere in the classroom by offering an example of acceptance, understanding, and social support. Many teachers, however, may lack the expertise, knowledge, and confidence to take on this responsibility because, as the Royal National Institute for Blind report points out, there is a need for better awareness and instruction for mainstream school teachers about the needs of blind and partially sighted pupils (Royal National Institute for the Blind, 2011; Swart, 2015).

The above studies revealed some socio-psychological challenges students with disabilities, more especially those VI faced in school. These included feelings of loneliness and social isolation from peers. To fully include students with VI in inclusive schools to propel their academic performance, their social relationships with their sighted peers, teachers, and even school administrators must be considered. However, there seems to be an apparent lack of literature in the Ghanaian context about the social challenges of students with VI in inclusive senior high schools in Ghana. Therefore, This study explores students' experiences with VI, their teachers and school administrators regarding the social challenges students with VI face in inclusive senior High school, specifically Okuapeman Senior High School.

Academic Challenges Students with Visual Impairments Face.

Fuller, Bradley and Healey (2004) looked into the challenges experienced by students with visual impairment at the University of Gloucestershire, UK. He conducted a systematic study using 593 undergraduate students in the institution who had declared a disability. The study's findings revealed several challenges, including the lecturers' rapid speech rate during lectures and difficulty participating in discussions and responding to questions. Furthermore, the study found that students with VI voiced that several lecturers objected to students with disabilities being allowed to video the lectures. Also, their access to educational centres was difficult. There were also no acceptable computer applications available. Ibrahim (2001) investigated the issues faced by visually impaired students at Jordan's University. The study found issues with using the library, transportation, and teachers' awareness of their requirements. The study found no significant variations in handicapped gender, degree of disability, or educational level. He goes on to say that this is due to a variety of factors, including a lack of connection between special needs and other students and teachers lacking the necessary skills in teaching strategies to handle the inclusive curriculum. As a result, for an inclusive programme to be successful, it requires a regular classroom that is responsive to the needs and skills of the children.

Agesa (2014) conducted a study on the challenges faced by learners with visual impairments in inclusive settings in Trans-Nzoia County in Kenya. The study employed a descriptive survey design to investigate the difficulties that learners with vision impairment confront in the County. The population

comprised 184 visually impaired students, twenty classroom teachers, and six itinerant teachers, from whom a sample population of 110 was derived. Qualitative and quantitative data-gathering were used through questionnaires, interviews, and documentary analysis. The study discovered that most visually impaired students performed poorly in school due to a lack of execution of the inclusive curriculum, which requires a differentiated curriculum by the Special Needs Education policy. According to the author, this is attributed to social, economic, and partly cultural factors. Because of the wide range of demands of students with visual impairments, additional special education teachers are needed so that at least one is available in each regular school. The author recommended that Parents of visually impaired children and the general public should be educated about their children's schooling (Agesa,2014).

Otyola, Kibanja and Mugagga (2017) conducted a study on challenges faced by students with VI at Makerere and Kyambogo University. Responses from the students with VI who participated in the study showed that they experienced numerous obstacles in reaching their academic goals. Six per cent of the study participants face reading difficulties, a lack of equipment, isolation, a shortage of textbooks, movement difficulties, and tuition fees. Materials, movement and mobility issues, unfavourable attitudes, academic competitiveness with other students, and a lack of focus in lecture rooms owing to noise from non-disabled students are some of the hurdles that these students experience. Responses from the lecturers who participated in the study showed that students with VI face various challenges (Otyola et al., 2017).

According to professors included in the study, 26% of students with VI do not know Braille, 20% do not understand Braille language, 16% are slow to instructions, 14% rely on friends for their assignments, and 10% do not have enough writing supplies. Most lecturers in the study admitted that they are not trained or do not have the needed skills to work with VI students or to educate and deal with them. The students with VI also noted that the lecturers' teaching methods, such as lecture methods and dictating notes to students, are not conducive to appropriate student teaching and learning. From the result, the students noted that some lecturers need to familiarise themselves with Braille education. As a result, they wind up investigating and evaluating them using ineffective approaches, causing their study to fail (Otyola et al., 2017). Lecturers who teach Braille also lamented that some students did not know Braille before being admitted to the school, and this caused their learning delay. According to university administrators, VI students experience several problems at university (Otyola et al., 2017). Twenty-six per cent of schools lack Braille-trained employees, 22 per cent of VI students have difficulties registering, and 20 per cent are generally separated—lack of disability training for university officials on the obstacles students with VI face. According to the administrators, most of the students with VI could not communicate in Braille and had issues registering and entering their grades into university systems (Otyola et al., 2017).

Another study was carried out in the USA by Lopez-Gavira, Moria, and Morgado (2021) to determine the difficulties faced by university students with disabilities and personnel who provide disability support services. From the findings, students with disabilities believed that faculty members should

adapt their teaching strategies and evaluation processes (exam formats, timing, use of technology, flexible scheduling) to support their inclusion and use resources catered to their requirements. They added that these modifications should be done in advance and, ideally, at the beginning of the course, before the classes start. Faculty members faced challenges in implementing all these modifications when creating their classes, according to staff and students with disabilities. On the one hand, the students claimed that certain professors were unwilling to alter their methods of instruction or the methods used to assess their topics. On the other side, they emphasised how frequently faculty members needed more preparation or training to make the necessary adjustments and provide a more inclusive education. The students recommended that professors be trained in disability issues or special education courses to satisfy the needs of various students with impairments (Lopez-Gavira et al., 2021).

Brydges and Mkandawire (2017) studied perceptions and concerns about inclusive education among students with VI in Lagos, Nigeria. The findings below reflect the various perspectives of students with VI in Nigeria on inclusive education. The findings are divided into three themes. More additional instruction, specialised instruction, classroom support, and bullying should be needed. The level of attention and instructional support that children with disabilities receive in inclusive classrooms was one of the topics that came up frequently during the interviews. While teachers were said to pay special attention to students with disabilities on occasion, it was more common for teachers to ask peers or friends of students with VI to help them with dictating notes, teaching challenging ideas, or moving around the school

campus (Brydges & Mkandawire, 2017). While the students expressed gratitude for their classmates' assistance, the authors noted that the students with VI reliance on peers for further education present several concerns. Even with the assistance of their peers, it was clear from interviews that all students with VI lacked adequate supplementary education (Brydges & Mkandawire, 2017).

Compared to their peers without disabilities, students with VI reported having significant difficulty learning mathematics in an inclusive classroom (Brydges & Mkandawire, 2017). According to the authors, learning mathematics necessitates the student's understanding and application of mathematical language in listening, speaking, reading, and writing (Brydges & Mkandawire, 2017). Without additional, specialised attention from the teacher, mathematics requires a specialised vocabulary and a system of symbols meaningful to mathematical thought. Students with impairments may not easily acquire it (Brydges & Mkandawire, 2017). Students with disabilities responded that, in addition to increased training, they require more specialised classroom technology to satisfy their needs (Brydges & Mkandawire, 2017). Most of the VI students stated that they required access to the Job Action with Speech (JAWS) programme, which would enable them to utilise computers; because of that, they could not engage in computer lessons without this software (Brydges & Mkandawire, 2017).

Another major worry, in addition to the lack of educational tools, was the occurrence of bullying in inclusive classrooms and on school playgrounds. In inclusive classrooms, peers make fun of each other. Students with visual impairments reported being harassed or bullied (Brydges & Mkandawire,

2017). The view of one of the students with VI from the study is captured below;

Oge, a Grade 7 student, noted that on some occasions, When, maybe, your writing material falls and when you need someone to pick it [up] for you, he kicks it further away from you. Moreover, you need help finding it. Moreover, when you tell them to help you find it, instead of helping you get it, they only laugh at you and mock you (Brydges & Mkandawire, 2017, p.221).

Lamichhane (2017) conducted a study on teaching students with VI in an inclusive educational setting in Nepal. The findings of the studies show that, while each student has unique educational needs, students with VI experienced obstacles in receiving a quality education in an inclusive educational environment because their needs are unmet. Questions concerning educational materials available to them and issues they face with subject matter were examined in a focus group discussion among students. Students with VI are typically taught by the same subject teachers, who have no training or experience teaching students with VI. All students indicated that mathematics, particularly geometry and science subjects, were difficult to study in the mainstream class, regardless of their grades (Lamichhane, 2017).

From the VI students who participated in the study, due to the vast number of students without disabilities, as well as a lack of both the strategies and the technology to deal with those with disabilities, mainstream teachers are unable to devote special attention to explaining picture-based difficulties to them (Lamichhane, 2017). According to the VI students, the lack of support and facilities was also a concern. The students, however, stated they could continue learning in the school with the help of friends. The students also

voiced that some of their teachers were unaware of how to teach students with VI. Science, mathematics, and even English were frequently taught on the chalkboard with no adaptation to include students with VI (Lamichhane, 2017). The same interviewee mentioned that he was able to catch up on lessons thanks to the help of a non-disabled colleague.

Furthermore, students with VI added that they found it challenging to learn some content in disciplines such as social studies (Lamichhane, 2017). Similarly, due to the need for a Braille dictionary, pupils in grades 9 and 10 struggled to acquire English as a second language (Lamichhane, 2017). Some views of participants in the study by Lamichhane (2017) are captured below;

'If the dictionary is available in Braille, we could understand each word's meaning and make fewer spelling mistakes, ' said a student in grade 10' (Lamichhane, 2017, p.9).

The study further found that despite pupils being provided slates and styluses, it was discovered that the school only had a Perkins Brailler for resource instructors (Lamichhane, 2017). The study also revealed that the school lacked computer tools enabling resource instructors in charge of students with VI to produce materials, such as test questions, in Braille. There was no protocol to allow students with VI to take tests in Braille in the school context, especially for upper-graders (Lamichhane, 2017).

Hewett et al. (2017) conducted a study that focused on creating an inclusive learning environment for students with VI in higher educational institutions. The research used a longitudinal qualitative approach to investigate the experiences of 32 young people in the United Kingdom who had VI. Participants stated that their institution made some adaptations to

allow them to access their course but that there were no anticipatory adjustments, which created challenges for them. In addition, this impediment was the need to meet deadlines to adjust for students with VI. This often-put additional pressure on university employees, who pointed out that their institutions lacked specific knowledge and resources to accommodate students with VI (Hewett et al., 2017).

In his thesis, Lourens (2015) focused on students' life experiences with a VI in higher educational institutions. 'Two universities in the Western Cape, South Africa, were studied using a phenomenological qualitative design. The result of the study indicated the difficulties the students with VI face in the universities, which included challenging social encounters with non-disabled peers, the unwillingness of some lecturers to adapt them, a lack of communication among critical role-players, late course material as well as headaches and muscular strain as a result of the difficulty of reading with limited vision in the learning environment (Lourens, 2015). The students described how they frequently campaigned for themselves and assumed responsibility for obtaining special accommodations (Lourens, 2015).

In Ethiopia, Temesgen (2018) conducted a study on the challenges faced by students with VI in Ethiopian schools. The participants' experiences with educational challenges for students with VI were investigated using a phenomenological design. Students with VI who participated in the study said they faced challenges. According to them, these include the following: teachers discreetly writing notes on blackboards during instructional hours. According to them, this excluded VI students from what was written on the board. After realising they had excluded students with VI, they added that the

teachers would now go and start teaching overall again. They saw that the process took up a lot of class time. As a result, it slows the learning process and does not benefit them and other students. The participants noted that they had to suggest that the teachers narrate or articulate what they write on the board to ensure that all students benefit equally. The students with VI also commented on lesson modification and how teachers frequently put pictures, graphs, and charts on the classroom wall.

According to them, teachers putting pictures, charts and graphs on classroom walls show that the teachers are unconcerned about our existence and that if they did, they would have created tactile teaching aids or provided a spoken explanation of the images to the students with VI to ensure they all equally benefit from all the learning materials in the classroom (Temesgen, 2018).In order to evaluate the difficulties in implementing inclusive education in public secondary schools in the Rongo sub-county of Migori County, Kenya, Lucy, Nyangia and Orodho (2015) performed a study on the subject. The study found that due to the teacher's need to divide their time and attention between the two categories of students, educating without disabilities and those special educational needs in the same class had an impact on the quality of instruction and slowed down the instructional time and the time needed to complete the syllabus.

In Asia, Amin et al. (2021) conducted a study to examine the significant challenges faced by students with visual impairments in higher educational institutions, focusing on how these students experience life in a Malaysian higher education setting. Using a case study design, this study adopted a qualitative methodology. Five students, four of whom were male

and one of whom was female, participated in the in-depth interviews. According to the study's findings, most participants encounter five critical difficulties. These were financial difficulties, social stigma, accessibility, peer acceptance, and difficulties with university studies. According to them, accessing university education was challenging because some of the universities do make accommodations for students with VI. The stigma of society is the second difficulty that most informants encounter. Stigma and unfavourable social judgments were also identified as challenges (Amin et al., 2021). This occurs when the general public lacks comprehensive awareness of issues about people with disabilities.

Additionally, campus inhabitants, particularly support personnel, still do not understand the requirements of students with VI. They still lack a basic understanding of the requirements and limitations of students with disabilities, particularly those who have VI. This was demonstrated by some VI students who noted that dealing with staff regarding academic issues is quite challenging. According to them, students with VI must first explain their vision problem to the on-duty staff (Amin et al., 2021). The availability of information is the third difficulty faced by VI students. Most respondents claimed they needed help using internet resources, university infrastructure, and information or reference materials (Amin et al., 2021). They need more access to high-quality facilities due to these difficulties (Amin et al., 2021). The students with VI claimed that their difficulty in learning something lies in their difficulties while trying to learn something written down or available digitally (Amin et al., 2021). According to the findings, the VI students struggle to get information available digitally and with the online materials

available on the university's online system. Amin et al. (2021) also noted that although most regional universities use internet systems to facilitate students' access to the most recent information on academic materials, students with VI appear to be left out. Some studies were also done in Ghana on the experiences of VI students in accessing education.

Nanor, Odame, Opoku, Nketsia, and (2021) conducted a study on graduates from Ghana's universities who had VI. The specific goal of this study was to investigate the university experiences of employed graduates in Ghana who have VI. Fourteen graduates with VI were chosen from three regions in Ghana and interviewed in person. A descriptive theme analysis was conducted after the verbatim transcription of the interview material. The result of the study showed that nearly all participants acknowledged that they had faced several difficulties while participating in specific programmes during their undergraduate careers. The participants also discussed the difficulties they encountered while participating in several programmes. Nearly all of them indicated that specific courses within their programmes of study such as statistics, information and communications technology, phonetics, and phonology were not accessible to them.

For instance, a participant pointed out that there were problems with educational statistics courses because they provided them with different questions that called for calculations. This is expressed in the participants' own words as stated below;

Phonetics used additional symbols not present in Braille, so we needed to figure out how to format it for the resource person to transcribe. Occasionally, changes were made; other times, none were. Blind people

cannot complete academic programmes requiring rigorous math or statistics besides B.Ed. Arts, the institution should provide accommodations for blind students who wish to enrol in those programmes. It is essential to make other programmes accessible to blind people. Braille cannot be used for mathematics. For instance, while computers can perform multiplication and addition, Braille cannot (Nanor et al., 2021. pp 341-347).

The lack of Braille and audiobooks was a recurring concern that rang true for most interviewees regarding the teaching and learning experience of students with VI. According to the participants, ten of the lectures needed to be customised to their needs, and even the reading materials sold to them were only available in print. The lectures could only be heard on tape, or they may be given to their resource personnel for brailling. It was challenging for them to review all the materials and synthesise the ideas because few resource personnel were available, and the lectures piled up daily. These difficulties unintentionally hindered their academic performance and engagement in the teaching and learning process (Nanor et al., 2021).

From the above studies, academic challenges students with VI face were found among students with VI in higher institutions. Some students, like Brydges and Mkandawire (2017) in Nigeria, Lucy et al. (2015) in Kenya and Temesgen (2018) in Ethiopia, focused on the academic challenges students with VI face in primary and secondary schools. The academic challenges students with VI face in Ghanaian inclusive senior high schools appear missing in the literature. This study, therefore, seeks to bridge that literature gap.

Attitudinal challenges students with Visual Impairments face.

Most of the hurdles to education for children with VI, as Mastropieri and Scruggs (2010) pointed out, are negative attitudes. These attitudes and prejudices, like those in society in general, result from a lack of knowledge and awareness about the group. Chhabra, Srivastava, and Srivastava (2010) researched Botswana to identify instructors' attitudes and concerns about including children with disabilities in mainstream classrooms. The study aimed to explore Botswana teachers' attitudes and concerns about inclusive education. According to the data, teachers in Botswana have a negative attitude toward inclusive education and are concerned about it. The findings also show that many ordinary teachers are unprepared and afraid to work with students with disabilities in regular classes. As a result, they express irritation, anger, and unfavourable attitudes about inclusive education because they believe it will result in poorer academic standards (Chhabra et al., 2010).

Furthermore, teachers expressed concern about insufficient equipment and the lack of paraprofessionals in schools that serve students with severe disabilities (Chhabra et al., 2010). They were concerned about the availability of resources and funding to support students with disabilities in mainstream settings. As a result, integrating children with impairments into regular classrooms needs the inclusion of paraprofessionals. According to the research, teachers do not have adequate knowledge or training to handle the needs of pupils with disabilities in inclusive settings (Chhabra et al., 2010).

These findings also show that all teachers in Botswana require further training and improved preparation to give successful programming. One factor could be their lack of experience and training in teaching students with special

needs (Chhabra et al., 2010). A similar result was found in a study conducted in Kenya. In order to evaluate the difficulties in implementing inclusive education in public secondary schools in the Rongo sub-county of Migori County, Kenya, Lucy, Nyangia and Orodho (2015) conducted a study. Stigmatisation, unfavourable social attitudes, and parental ignorance were the main challenges parents of children with disabilities had in educating these children.

A study was carried out in the USA by Lopez-Gavira, Moria, and Morgado (2021) to determine the difficulties faced by university students and personnel who provide disability support services. The study's findings demonstrate many elements that, as noted by students with disabilities and professionals from disability support services, impede inclusive education in a university context. Through examining their views about disabilities, appropriate accommodations for learning, and the use of technology as a facilitator of educational inclusion, the study addressed the crucial role of the faculty in student inclusion. The attitude of the faculty toward students with disabilities was found to be an impediment to inclusion. It was found that the faculty as a whole demonstrated a good attitude toward students with disabilities and did not suggest a barrier for these students, according to the perspective of disability service employees.

The perception of students with disabilities, however, was different from that of the staff because they believed that the professors did not always have a good attitude toward them (Lopez-Gavira et al., 2021). In particular, they emphasised how some academics frequently functioned as obstacles to

students' academic lives because they were uninterested in or unconcerned with their needs.

Additionally, they mentioned that several professors prioritised their own needs or the requirements of the general student body over the needs of students with disabilities (Lopez-Gavira et al., 2021). Despite those above, some students emphasised that not all faculty members had a hostile attitude toward them; some had a friendly attitude toward them, which was very helpful to their academic life (Lopez-Gavira et al., 2021). They also mentioned how highly inspired they felt when the academic staff acknowledged and appreciated their work and efforts toward achieving the objectives outlined in their topics. Some faculty members' compassion for them and efforts to address their needs also greatly aided the students (Lopez-Gavira et al., 2021).

A view of a participant is captured below;

I am generally happy with my academics since they support me in every manner, do not forget about me, and always work with me. When someone is willing to assist you and engages in regular conversation, it inspires you. However, some professors seem not accommodating to students with disabilities. Their attitude is sometimes not welcoming (Lopez-Gavira et al., 2021, p.296).

Koo (2017) studied at the University of Saskatchewan in Canada to examine the current faculty attitudes and willingness to provide accommodations for students with impairments. Two hundred twenty-nine disabled students and 137 academic staff members from the various colleges participated. The majority of academic staff and students indicated in the study that they were generally willing to make accommodations. Based on variables

including gender, age, and academic department, there were some notable disparities in teacher opinions and their accompanying readiness to make concessions. Depending on the condition they claimed, there were also noticeable differences in how the students felt about their experiences trying to get accommodations. While most students believed that their professors were willing to provide accommodations, faculty members expressed a greater belief in doing so and in supporting students who choose to use accommodations.

In Ghana, Asamoah et al. (2018) conducted research to evaluate the perceptions of visually impaired students at Senior High School, their counterparts without visual impairments, and teachers in an inclusive education setting focusing on a second-cycle educational institution in Ghana. The majority of the students without impairments who participated in the study were unhappy with the practice of inclusive education, according to the findings. According to the result of the study, students without VI believed that when those with VI are blended with those without VI, the learning speed slows, and academic development is hampered for Students without VI. Some students without impairments said they could not cover enough of their syllabi because they were in classes with pupils with VI. The teachers would have to make accommodations for students with VI, which slows down the teaching and learning process.

This finding supports the results of an earlier study conducted by Downing and Peckham-Hardin (2007), who found that pupils without impairments believed that integrating pupils with impairments into the regular classroom would detract them from their academic success. Agbenyega (2007)

also found that integrating pupils with impairments causes syllabi to be incomplete. It also suggests that pupils without impairments did not support inclusive education since the majority of them received primary education without interacting with pupils with VI or any other form of disabilities in the same classroom. This finding, therefore, suggests that students without disabilities show a cold attitude toward inclusive education because of the perception that it delays instructional processes in an inclusive classroom. The research by Asamoah et al. (2018) demonstrated that pupils without impairments had good views toward pupils with vision issues and provided academic help to them. However, they see inclusive education as delaying their instructional periods in the classroom.

Bunch and Valeo (2004) argue that pupils without impairments build acquittances with pupils with special needs in inclusive environments. Although some pupils without impairments objected to inclusive education, others supported the approach by offering academic help to their colleagues with visual impairments. The inference is that inclusive education might be effective if the correct method is used to create a balance between serving the requirements of both students with disabilities and those without disabilities. This may be accomplished by providing teachers with adequate instruction in an inclusive context.

In an inclusive senior high school, some work has been done in Ghana by Asamoah et al. (2018). Their students looked at the perceptions and attitudes students with VI, and those without disabilities have regarding inclusive education and not the attitudes they have towards students with VI in

the school. This study also seeks to discover the attitudinal challenges faced by students with VI in inclusive senior high schools.

Physical Environment Challenges Students with Visual Impairment Face

Ainscow's (2019) recommendation on 'Developing Inclusive and Equitable Education System' mentioned the need for equal opportunities for all learners in implementing inclusive education. Similarly, Ghana's 2015 IE policy and the Standard and Guidelines for implementing inclusive education highlighted the need for environmental accessibility at all levels of education. However, this is not the case in Ghana and in many African countries, as students with disabilities still find some challenges in how public buildings and some structures in the physical environment are put up.

Temesgen (2018) conducted a study on the challenges students with VI face in Ethiopia. The participants' experiences with educational challenges for students with VI were investigated using a phenomenological design. From the result, environmental difficulties have been noted by participants with VI as one of the difficulties they face in accessing facilities such as classrooms, playgrounds and office buildings in the school. According to the students with VI, their primary hurdles are hastily built poles and exposed ditches, preventing them from studying with their peers and participating in social events outside the classroom. They also raised concerns that stone hips and other materials left on some walkways served as barriers to them (Temesgen, 2018).

Amin et al. (2021) explored the primary challenges faced by students with VI at higher education institutions in Malaysia. It was discovered that students with VI have difficulties with physical accessibility. The capacity of

visually impaired students to go from one location to another on campus was a challenge for the students. This study also examined how easily visually impaired students may access locations they do not frequently visit and the challenges they encounter in getting to specific locations on a campus. The students claimed that getting to a location, particularly one they do not visit often, is challenging. Several factors contribute to these challenges. The geography of the place they want to go, illumination, unclear signage, and some of the elements that limit their access to a place or location within the university (Amin et al. et al., 2021). They noted that when they want to move from one faculty, for instance, to another, an unknown path and generally perplexing road makes it difficult for them.

Additionally, the fact that informants in the study do not frequently use unfamiliar topographical elements makes it challenging for them to go where they need to go. Although the university offers pedestrian amenities, significant shortcomings exist (Amin et al., 2021). For instance, pedestrian lanes are close to hills, and the available walkways must be routinely maintained (Amin et al., 2021). Informants added that there were no barricades on the provided sidewalks, and because vehicles utilising the road on campus do not adhere to the established speed restriction, pedestrian users, especially students with disabilities, will be put in risk areas they do not frequently visit are more challenging for them to access (Amin et al. et al., 2021).

Odame et al. (2021) investigated the experiences of graduates in Ghana with VI. The data was gathered using a semi-structured interview guide that was created after reviewing the literature. The study discovered that the

participants experienced mobility-related challenges that interfered with both academic and extracurricular activities on campus. Eleven participants reported needing help getting to most university facilities, including lecture halls, libraries, transportation, and dorms. Participants with VIs were not accommodated in the teaching materials or built environment, which limited their capacity to engage equally.

A very recent study conducted in Ghana by Vanderpuye, Nyame, and Okai (2022) at the University of Cape Coast to explore the challenges inherent in the academic endeavours of students with VI found a similar result. The result of the study showed that students with VI face physical and environmental challenges in the university. Concerns of some of the students who participated in the Vanderpuye et al. (2022) study are quoted below;

Some open gutters are supposed to be closed but are not closed, so we are just falling into it. Talking of the staircase at lecture theatres, there are no elevators, so sometimes we will have our lectures upstairs. If there is something like a stampede, it can affect us (Vanderpuye et al., 2022, *p*.5). *There are open gutters, and there is nothing to guide us to know that this place has an open gutter. It makes our movement very difficult (*Vanderpuye *et al., 2022, p.6)*

Other participants added that.

One of my biggest challenges in the university is going to the resource centre. The place is very dark, and the stairs are very steep. From this, some of the gears around are too big (Vanderpuye et al., 2022, *p*.6)

While the above studies acknowledged the physical environmental challenges students with VI faced, the studies conducted in Ghana focus on the physical

environmental challenges students with VI in universities face. The experiences of students with VI in inclusive senior high school in their movement physical environment (school campus also appear to be missing in the literature. This study seeks to bridge this literature gap.

Summary of Literature Review

In reviewing the relevant literature for the study, the chapter highlighted the previous work of renowned researchers and practitioners in the field of special education in order to contribute to the development of conceptual and theoretical frameworks appropriate for the study. The Sociocultural Theory by Vygotsky (1978), which is the study's underpinning theory, was reviewed in this chapter. The conceptual review looked at various concepts, such as inclusive education, visual impairment, and the learning environment for learners with visual impairments. The empirical literature reviewed is in line with the objectives of the study. Prior empirical studies on the social challenges of students with visual impairments and academic challenges Students with visual impairments face. Attitudinal challenges students with visual impairments face and physical environment challenges. Students with visual Impairments face were reviewed. The review identifies gaps in previous studies, which the current study seeks to address.

CHAPTER THREE

RESEARCH METHODS

Introduction

The research method that was used for the study is explained in this chapter. The chapter describes the research design, study area, population, sampling procedure and the data collection instrument. Other issues covered in this chapter are the pre-test of the instrument, data collection procedures, data management, data analysis and ethical considerations.

Research Design

The study used the social constructivist paradigm. In this paradigm, the subjectivity of knowledge is stressed. Its fundamental premise is that people form meaning and understanding about items and things with subject minds as a result of their social interactions as they attempt to understand the world around them (Andrews, 2012; Burr, 2003). In an attempt to make meaning of such interactions, Creswell (2008) claims that the meanings obtained from them are plural, leading the researcher to explore the heterogeneity of views rather than reducing meanings into a few categories or ideas. Underneath this paradigm, the study participants' perceptions of the phenomenon under examination and the study context were given priority in the inquiry (Creswell, 2008). The use of qualitative research methods supports this viewpoint. In qualitative research, the emphasis is on participants' views, experiences, and ways of making sense of their lives (Fraenkel et al., 2010). This study's emphasis on examining students' experiences with VI placed them in the qualitative research paradigm. Additionally, the social constructivist paradigm will be chosen for the study since it is congruent with earlier

research that examined experiences related to students with VI conducted by Vanderpuye et al. (2022).

The case study design was used in this study by the social constructivism research paradigm and the qualitative research methodology that served as its direction. The study used the embedded case method (Yin, 2003). This is due to the study's singular emphasis on Okuapeman Senior High School. Creswell (2008) defines the case study design as the study of a subject investigated through one or more cases inside a restricted system. A case study is an empirical enquiry that analyses a current phenomenon inside its real-life environment, especially when the boundaries between phenomenon and context are not readily visible, according to Yin (2003). This means that it is beneficial when it is necessary to cover contextual factors because they are very relevant to the phenomenon being studied. When "how" or "why" inquiries are asked, the case study style is recommended, according to Yin (2003). Because it allowed for the incorporation of various data collection techniques to examine the contextual issues of challenges affecting students with visual impairments, the case study design is deemed appropriate for this study.

The significance of case studies in educational research must be considered. It has proven helpful in studying educational innovations, programme evaluation, and policy formation in education (Merriam, 2009). This is not to say that case study research has no limitations. The sensitivity and integrity of the investigator are some limitations in qualitative case studies (Stake, 2005). The researcher is the most essential tool for gathering and analysing data in this type of research. The researcher is left to rely on his or

her instincts and abilities to analyse the data. This may present some form of bias on the part of the investigator (Queirós, Faria, & Almeida, 2017). Other concerns, such as reliability, validity, and generalisability, are possible limitations of qualitative case study research (Queirós et al., 2017).

Flyvbjerg (2006) states that a single case can advance both natural and human sciences. In addition, he argues that formal generalisations based on huge samples contribute too little to scientific advancement. Erickson (2012) also supports case studies, claiming that because generality rests in the specific, what we learn in one scenario can be applied to another. With the limitations of the case mentioned by Queirós et al. (2017), the researcher was very cautious and objective in analysing and discussing the results to ensure that they were in their purest form, unadulterated by his personal beliefs.

Study Area

Okuapeman Senior High School is a coeducational second-cycle second-cycle institution in Akropong in the Eastern Region of Ghana. The school is located in the Akuapem North District and was established in February 1957. Akropong is a town in Southern Ghana and is the capital of the Akuapim North District, a district in the Eastern Region of Ghana. This town is known for producing snails and palm oil. The town is situated between longitude 0°15 W - 0°00 and latitude 5°45 - 6°00 N located on the Akuapem Ridge, which runs northeastwards across the Volta Region and extends further into Togo. It is bounded South by Ga (Akra), East by Adangme and Krobo, and North and West by Akem. Rainfall averages 127ºmm and the weather reflects the invigorating, salubrious, mild, cold mountainous climate. With Akuapem Twi spoken by almost all the residents in the Akuapem mountains,

it could be said that the Twi language can be the most effective medium of mass communication and functional education as well as development information dissemination. Arming was the primary occupation of the populace.

Major crops are cassava, maize, yam, plantain, potatoes, and vegetables. Non-traditional products, particularly snails and mushrooms, are also being produced. Their production is rising, allowing investors to exploit emerging export markets and reap significant foreign currency earnings. The main crops grown in the district are maize, cassava, vegetables, plantain, citrus, oil palm and cocoa. The district also produces many vegetables on the ridge and the lowland areas. These include tomatoes, lettuce, cabbage, local pepper, sweet pepper, and squash. The school has significant boarding facilities and well-built structures ranging from the administration block to the classroom block. The school can also boast bungalows for tutors, a library, laboratories and a field for recreational activities. Programmes offered in the school include General Science, General Arts, Home Economics, General Agriculture, Business and Vision Arts.

Population

A population is an aggregation about which we seek to make inferences by sampling (Waples & Gaggiotti, 2006). Neuman (2007) defines population as the unit from which a sample is made. The total population is 162, involving all students with VI, teachers who teach in classes with at least one student with VI and a non-teaching administrative staff at the Okuapeman Senior High School. The non-teaching administrative staff includes staff that

work as full-time workers in the school's administration. The population is presented in Table 1.

Table 1: Population of Participants

Participants	Males	Females	Total
Teachers	79	22	101
Administrative staff	3	3	6
Students with VI	54	42	96
Total	136	67	203

Source: Field Survey, 2022

Sampling Procedures

The sample is a subset of a population (Tongco, 2007). I used purposive sampling techniques in this research. Purposive sampling is a sampling approach in which the researcher selects participants based on their knowledge of a specific topic (Tongco, 2007). According to him, it is the researcher's responsibility to determine what information to seek and who is willing to supply that information. As a result, purposive sampling is also described as flexible. According to Amin (2005), purposive sampling is the type of sampling in which the researcher uses his/her own judgment regarding the selection of participants from whom required information will be collected. The selection of the participants were purposively done to ensure that rich information about the school challenges students with VI are facing in the inclusive school is obtained and also to get a deeper understanding of the phenomenon. I used purposive sampling because I am interested a particular characteristic of the population which is students with VI in inclusive senior high school, teachers who teach students with VI inclusive senior high and also school non-teaching staff at school. I purposively selected

these categories of teachers, students and school non-teaching staff at the Okuapeman Senior High School for the study.

According to Stratton (2021), convenience sampling is non-probability sampling that is often used for clinical and qualitative research. This sampling technique often selects clinical cases or participants that are available around a location (such as a hospital), medical records database, Internet site, or customer-membership list. I used convenient sampling to select participants who were available to participate in the study. Teaching and non-teaching staff are included in the study because they spend most time with the students so they were at a position to observe some of the challenges students with VI face in the school. Once these categories of participants are selected, the sample size was determined by using data saturation (Fusch & Ness, 2015). Bernard (2012) earlier stated that, the number of interviews needed to reach qualitative data saturation cannot be quantified but it depends on the researcher. According to him, the researcher can take what he can get as long as he reaches data saturation. The choice of twenty participants for this study for the qualitative data was therefore guided by Creswell et al. (2007) and O'Halloran et al. (2018) recommendation of between five to 25 participants for phenomenological studies as well as Morse's (1994) suggestion of at least six participants. The sample size is presented in Table 2 below.

Table 2: Sample Size

Participants	Males	Females	Total
Teachers	4	1	5
Administrative Staff	2	3	5
Students with VI	5	5	10
Total	11	9	20

Field Survey, 2022

Data Collection Instruments

Data is the information gathered to investigate a case or study (Seaman, 2008). Questionnaires, tests, interview guides, and checklists are just a few examples of data collection instruments (Seaman, 2008). I made use of unstructured interview guides. This type of interview is a verbal exchange in which one person, the interviewer, uses questions to elicit participant data (Clifford, French, & Valentine, 2010). Since it is flexible, it allowed me to pursue a series of unstructured questioning and obtain in-depth information from the participants. The unstructured interview guide was developed based on the research questions and objectives of the study. The instrument consisted of five sections (sections A -E). The Section A gathers information on the background characteristics of participants, Section B on academic challenges students VI faced in the inclusive school and Section C on social challenges students with VI face in inclusive school. The Section D also gathers information on physical environmental challenges students with VI inclusive school, Section E on attitudinal challenges students with VI face inclusive schools and finally the section.

Pre-testing of the Instruments

It is imperative to be watchful of the sources of error when conducting research. The essence of this pre-testing is to gain insights into the feasibility of administering the research instruments the clarity of the question. The development and validation of an instrument is primarily concerned with eliminating error in the data collection process (Kimbertin & Winterstein, 2008). The research instrument was pretested at Ghana National Senior School in Cape Coast since it is also inclusive senior high school admitting students

with VI. Three students with VI, two teachers who teach students with VI and two non-teaching staff at Ghana National Senior High School were interviewed for the pretesting. The coded data from these participants were not included in the main study. Each interview lasted between 25 and 30 minutes. The interviews were done in the participants' schools.

Trustworthiness and Authenticity

According to Noble and Smith, (2015), the validity and reliability of qualitative research are known as trustworthiness and authenticity. The researcher must reduce bias and raise the veracity of a claim regarding the phenomenon by assuring the research' credibility, transferability, trustworthiness, conformability and dependability (Lincoln & Guba, 2000). Concerns about the representativeness of the typically small sample employed in qualitative studies, as well as an alleged lack of rigour collecting, analysing, and interpretating data, have led to skepticism in qualitative research (Cobbold, 2015). This lack of rigour is linked to the issue of bias brought by the researcher's subjectivity. Lincoln and Guba (2000), developed qualitative research equivalents of internal validity as credibility, external validity as transferability, reliability as dependability and objectivity to ensure the study's conclusions were trustworthy which he termed as confirmability. The study's reliability and validity concerns were addressed in terms of credibility, transferability, dependability, and confirmability.

Credibility

In qualitative research, the credibility construct is the qualitative equivalent of internal validity (Cobbold, 2015). According to Cobbold, it typifies the degree of concordance between the actual viewpoints of the

participants and how the researcher has portrayed them. In the study, credibility was achieved through participants data triangulation (Reeves, Kuper, & Hodges, 2008) as it helped to reduce bias on the part of the researcher. This was done through participants interview triangulation, as the responses came from different participants (Students with VI, teachers and non-teaching staff) which aided the verification of finding and avoidance of bias and skewedness (Roper & Shapira, 2000). Participant triangulation is done to achieve credibility when the data is taken from different sources (Roper & Shapira, 2000). To achieve this, I collected the data from different participant categories: students with VI, teachers and non-teaching staff.

Transferability

The term "transferability" refers to whether a study's findings are applicable outside of the study's subjects and context (Cobbold, 2015). Although it does to a degree, the very tenets of its operation are that human behaviour is not random but unpredicted (Cobbold, 2015). As a result, researchers using qualitative approach are more concerned with the question of where their study will be applicable to rather than the question of whether their findings are just generalisable (Cobbold, 2015). To facilitate this, I gave a description of the study context and how the participants will be sampled. This information helped anyone transferring or making inference of my study to make judgement of which aspect of the result they want to use.

Dependability

The issue of dependability concerns whether the results of the study would be consistent and replicable if repeated with the same participants in the same setting (Neuman, 2007). Consistency is achieved through transparent

research method used to arrive at a conclusion (Neuman, 2007). Mertens (2005) has stated that a dependability audit should be done to certify to the quality and suitability of the inquiry process utilised in the study in order to permit dependability. To achieve this, I meticulously documented all decisions taken during the research process, including the data collection instrument, data collection coding, and data analysis techniques, in order to permit a reliable audit of the research process.

Confirmability

Confirmability is concerned with demonstrating that facts and interpretations of findings are not merely figments of the researcher's imagination, but can be traced back to where the data were collected (Tobin & Begley, 2004). To achieve this (Mertens, 2005), noted that the approach used to interpret the data is stated clearly, and the process of integrating data to derive conclusions may be verified. In the current study, confirmability was achieved through the triangulation of participant interviews, as the majority of the statements were stated verbatim in participants own words in the data analysis to reflect what participants views are on the interview questions that will be asked.

Data Collection Procedure

The data collection was preceded by an introductory letter requested by the Department of Education and Psychology, University of Cape Coast. This was given to the participants through the head of the school. This was done to enable the participants to elucidate what the research was about fully and to eliminate all possible issues that might baffle their minds. The formal introduction also helped to establish rapport and to explain how the

instruments were used that is, one-on-one interview with the participants with the permission from them to use of an audio recorder. With the approval of the interviewees, all interviews ere be recorded. Each participant spent an average of 25 to 30 minutes in the interview. The entire interview process took three weeks. In the realm of qualitative research, the face-to-face interview has long been the most common interview technique (Davies et al., 2020).

Data Analysis Procedure

Qualitative data analysis aims to find, code, and categorise patterns or themes in the data (Woods, 2011). I employed Braun and Clarke, (2019) thematic analysis of data. The steps I followed to analyse the data using Braun and Clarke, (2019) thematic analysing of data were familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report. All qualitative in-depth interviews that conducted during the field data collection were recorded and transcribed. Second, by regular line-by-line reading and re-reading, data from the interview transcripts I familiarised myself with the data for easy understanding and analysis. Re-listening to audio recordings and reading field notes were done during this step, as suggested by qualitative researchers Allen, (2010), to improve familiarity with the data. I then coded the transcribed data into codes and later categorise them into themes.

Ethical Issues

Informed consent, confidentiality, and the guidance of an ethical review board are the most important ethical factors in social research. Informed consent requires the researcher to provide the participants with correct information about the study's objectives (Kothari, 2017). I sought

ethical approval from the Faculty of Educational foundation of the University of Cape Coast's Institutional Review Board (IRB) in order to carry out the study. In addition, approval will be obtained from the participants' gatekeepers. Gatekeepers play a critical role in ensuring that researchers have access to the people and places they need to do research (McFadyen & Rankin, 2016). The participants were informed about the study's purpose and the nature of the instruments. All of the ethical principles outlined below were observed.

i. **Informed consent:** Participants were informed about the purpose of the study as well as their expected role in the successful completion of the study. After that, their verbal consent to engage in the study were sought. Participants were informed that those who wished to withdraw from participating in the study would be permitted to do so.

ii. **Right to privacy:** Conscious efforts were made to respect the privacy of all participants. The degree of intrusion into the private lives of all participants were guided by the objectives of the study. Participants were e not coerced to respond to questions they are not comfortable with.

iii. **Anonymity:** The identity of all study participants was protected, and they were made aware of that. To achieve this, real names and specific locations of informants were deliberately omitted from the research reports and final thesis. Codes and some bio-data were used to label the responses for the sake of analysis.

iv. **Confidentiality:** All participants were assured that all information given in response to questions posed during the study would be strictly used for the intended purposes. The information was kept private and were not be handed over to a third-party under any condition.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the findings and discussion of the study. The study sought to find the school challenges facing students with visual impairments (SVI) in the Okuapeman Senior High School in the Eastern Region of Ghana. Four major themes with 18 sub-themes emerged from the responses of the participants. The main themes and their corresponding sub-themes are presented with verbatim quotations in the chapter.

4.1 Demographic Characteristics of Participants

The Table 3 below presents the demographic characteristics of participants. From the table,10 of the participants were students comprising five female students and five male students. The students in form three were seven while the remaining two are form two students. The number of teachers were five comprising four male and one female teacher. Five school administrative staff, made up of three females and two male administrative staff, participated in the study. The number of years participants worked or lived in the school is also presented in the Table 3.

Table 3:Demographic Characteristics of Participants

No	Participant	Pseudonym	Gender	Number of Years work in the School / Form
1	Student	Student 1	Male	3
2	Student	Student 2	Female	3
3	Student	Student 3	Female	2
4	Student	Student 4	Male	3
5	Student	Student 5	Female	3
6	Student	Student 6	Male	3
7	Student	Student 7	Male	3
8	Student	Student 8	Female	3
9	Student	Student 9	Male	2
10	Student	Student 10	Female	2
11	Teacher	Teacher 1	Male	13
12	Teacher	Teacher 2	Male	7
13	Teacher	Teacher 3	Male	7
14	Teacher	Teacher 4	Male	2
15	Teacher	Teacher 5	Female	3
16	Administrator	Admin 1	Female	15
17	Administrator	Admi 2	Male	10
18	Administrator	Admi 3	Male	45
19	Administrator	Admin 4	Female	9
20	Administrator	Admin 5	Female	5

Source: Fieldwork, (2022)

Table 4: Thematic framework of the finding

Table 4.0 below present the thematic framework of the findings. Four major themes with 18 sub-themes presented in the table below.

Table 4: Thematic Framework of the Finding

Objectives	Themes	Sub-themes
Academic challenges students with Visual Impairment face	Academic challenges	Reading and writing difficulties Inadequate learning materials High cost of learning materials Inadequate number of classrooms Delay in release of examination results Inadequate number of resource teachers Teaching approach of some teachers
Social challenges Students with Visual Impairment face	Social challenges	Friendship is a burden Segregation at social gatherings Non-involvement in some sports activities Attribution of wrongdoings Discrimination in Social Clubs
Physical environmental challenges Students with Visual Impairment face	Physical environmental challenges	inaccessible places within the school Poor roads Open gutters and stones
Attitudinal challenges students with Visual Impairments face.	Attitudinal challenges	Labelling Verbal abuse Rude attitude

Source: Fieldwork, (2022)

Academic Challenges Students with Visual Impairment Face

In relation to the research question "What are the academic challenges, students with VI face in Okuapemman Senior High School?" one major theme, academic challenges, emerged with several sub-themes under it. The sub-themes that emerged under the academic challenges were reading and writing difficulties, inadequate learning materials, high cost of learning materials, inadequate number of classrooms, delay in the release of examination results, inadequate number of resource teachers and inappropriate teaching approach of some teachers.

Reading and Writing Difficulties

Reading and writing difficulties were expressed by participants as one of the striking challenges facing SVI in terms of their academics. While teachers were concerned about the writing difficulties, the students expressed concern with reading difficulties. Teachers expressed concern about the difficulties they have when reading transcripts of the SVI. According to them the writing of some SVI is not clear so even after transcription in the braille form by the resource's teachers, it becomes difficult at times to really comprehend what they are trying to communicate. The SVI on the other hand expressed concern about the challenges they face in reading. According to them, because their text books are not in braille, they had to depend on their sighted colleagues to read for them. Some also expressed difficulties reading braille. The views of the participants are captured below:

"Their writings are not clear. Sometimes you struggle to get the meaning of what they want to communicate in their essays. They make errors such as spelling mistakes, punctuations and grammatical errors. So, I asked the

resource teachers who transcribe their text and they also say they only transcribe what the students write. They don't alter what they write, so I need we need to work on their writing" **Teacher 4**

"……. Secondly, their written is not clear. They write according to how they hear the words which at times is not accurately written down well. Although some of the use the spell checker on the computer but not all of them use it" **Teacher 3 added**

A student added her view by stating that

"I am a low vision student and was diagnosed not too long ago. I don't know how to use the braille; I fall on note taking to aid in my studies. When a teacher is teaching in class, I write some of the note in my exercise book and depend on some sighted colleagues to read it for me. I tried some times to read it myself with my magnified lenses but it is not working. Reading is really challenging for me. I am now trying to learn the braille and it is difficult". **Students 2**

Inadequate learning materials

Participants noted that there was lack of learning materials such as braille materials, embossed textbooks which was affecting the studies of the SVI in the school. The views of participants are captured below.

"My only challenge here is that there are shortages of braille materials at times in the school" **Student 8**.

This view is supported by the views of a teacher and a school administrator as expressed below:

"Academically I will say they lack some things which help them to study. Like embossed textbooks, braille materials. They are not having and it is affecting their studies" **Admi 3**

"When it comes to academic challenges, we don't readily have their materials in relevant form. We don't have relevant materials like textbooks available in braille forms for them, and it is making reading difficult for them; imagine attending school and not having books to read. It's bad." **Teacher 4**

High cost of learning materials

The high cost of learning materials such as braille machines, braille sheets, braille embossers and brailed textbooks were recounted by participants as the financial difficulties affecting the purchase of materials for the SVIs. There is what some of them had to share:

"Moreover, their materials are very expensive. Materials such as Turkings, brailler, and braille sheets are very expensive. If you have to braille a textbook book that is thrice the price of buying the textbook itself. Moreover, all these have to be a personal cost. So, if your parents cannot afford it, it will go against your academic performance. The braille machines are also very expensive, so now we are encouraging them to go IT" **Teacher 4**

"I heard the braille sheets is very expensive in the market now. We have to fall on our parents and sponsors to help buy for us. So, if you're your parents don't have money and you do not have sponsors coming your, it means you'll not have money to buy braille sheet which can affect your performance in the exam". **Student 9**

Delay in release of examination results

The SVI lamented about long delay was the release of their examination results which they said is negatively impacting their on academic work. These views were also stated by some teachers. The views are elaborated below:

"My Academic experiences I will say so far so good but with challenges. Exam results are not released early on time for us. For example, when we write exams, the sighted students receive the results early but ours really delays. We need I need my result on time to access my strength and weakness but they don't release the results early enough even though we take the same exam with the sighted students" **Students 4**

A teacher added that,

"Yes, you see when we are done with exams transcribing their scripts becomes a bit difficult because the resources persons are not many. And at times it delays. Also, because transcribing their scripts delays, don't usually give the class too many written class exercises so that they (IV students) will feel discriminated against. Instead, I ask a lot of oral questions to test them their understanding of the subject I teach". **Teacher 2**

Inadequate number of resource teachers

The issue of resource teachers is very critical in special education. For SVI they need resource teachers to help in the braille library and also with the transcription of their braille scripts. Participants in this study remarked that an inadequate number of resources for teachers in the school is a challenge that is affecting the academic performance of SVI.

".... because the resources persons are not many there is pressure on the few making their work difficult. Sometimes the SVIs think their results have been

intentionally delayed by us but it is not so. The resources teachers are few and our work load is much" **(Teacher 5).**

An administrator of the school emphasied this point and her voice is noted below

"With the unique learning needs of the SVIs, I think that we need more resources teachers in the school to aid in their learning. However, that is not the case as the number of the resource teachers is not adequate and pressure seem to be on the few, we have to satisfy the learning needs of our SVIs" **(Admi 4)**

Inadequate number of classrooms and furniture

Inadequate number of classrooms and furniture were said by participants to be some of the challenges facing the running smooth academic activities in the school. For SVIs they remarked that they had to share classroom furniture with their sighed colleagues due to the inadequate number classrooms and classroom furniture. Below are some of their views:

"I will say infrastructure is a challenge. Because the classrooms are not enough so we do what we call pairing with our colleagues. So, we don't get comfortable seats to sit on in the class because the chairs in the classes are few" **(Students 7).**

".... well, the classrooms are not enough, but government has promised through the district assembly to build new classrooms for the school. With the furniture too, they are not enough and we are hoping to gather more" **(Admi 1)**

Inappropriate Teaching approach

The teaching approach of some teachers were recounted by SVI as posing challenges to them. The following narrative summarised their experiences.

"Some teachers write on the board. Some teachers do forget that they have VI students in the class and they write on the board without giving explanation to what they write. You would have to prompt them before they say what they wrote on the board" (Teacher 2).

Another SVI recounts her ordeal,

"Some of the teachers accommodate our needs when they are teaching but some of them whether knowingly or unknowingly forget to talk to us when they are writing, they only write on the board, maybe at the moment they had forgotten we are also in the class, so we had to draw their attention" (Students 10)

Social challenges Students with Visual Impairment face

In relation to the research question *"*what are social challenges students with visual impairment face in Okuapemman Senior High School in the Eastern of Ghana*"?* One major theme social impediment emerged with several sub-themes. These sub-themes are friendship is a burden, segregation at social gatherings, non-involvement in some sports activities, attribution of wrongdoings, discrimination in social clubs.

Friendship as a burden

From the views of SVI, making friends with their sighted colleagues was difficulty as some the sighted students draw away from them because they perceive friendship with them as a burden. According to the SVI, their sighted

colleagues do offer them help but are not interested in forming friendships with SVI. Their views are articulated below:

"The sighted students come close and have conversations with me. However, the challenge is that when some of them realise you are VI, they began to draw away from you. Some of them think it is a burden to befriend VI students because they would have to hold your hand and take you to certain places which is time consuming" **(Student 3)**

".....let's say I wake up at dawn and want to use to use the washroom or fetch water, I would have to call a friend who is sighted to hold your hand and take you there. This some of the sighted students see as a burden so they don't want to come close to us at all. Let alone befriend us" **(Students 10).**

Segregation at social gatherings

The SVIs recount how they were segregated during social gatherings in the school. This is expressed in their views as captured the quotes below:

"We are involved in everything but within that they exclude us in activities without knowing they did. For example, when we go for social gathering like entertainment, religious gathering they give us special places to sit. I personally feel this is a seclusion kind of thing they are doing. I sometimes want to sit among the sighted students and they what they do but they will group as at a particular place which is not cool for me" **(Students 4)**

Another SVI lamented:

"I feel sad when we go for social gathering and they group students with visual impairment at one side. I do ask myself why can't they make it possible for us to sit among our sighted colleagues? At times I do ask myself if we are really practising inclusion" **(Student 9)**

Non-involvement in some sports activities

Although SVI were included in sport activities in the school, it came to light that they are not included in all of the sporting activities. Some teachers and administrators who participated in the study noted that, the non-involvement in some sports activities is as a result of lack of specialise sports equipment for the SVI. Participants response included the following;

"…. for sports they include us especially in athletics. They have special running track for us. However, it is not all the sports activities that we are included in. For example, basketball like this they don't include us. Also, the athletics we only do it our schools we do not do it with the purpose participating in district, regional, national or international level" **(Student 2)**

"Because we don't have special equipment for their sports they are restricted when it comes to their full participation in sports. Again, when it comes to training for sports because they will need more time, the trainers at times will say you wait, we will get back to you later, sometime they do give them that special attention for the training other times too they don't do that. This is demotivating." **(Teacher 3).**

"When it comes to games, they don't include them in all because the specialise equipment are not them" **(admi 3)**

Attribution of wrongdoings

SVI lamented about what they called generalisation of wrong doing to them by their sighted students and some teachers. This according to them did not foster social cohesion. Their views are shared in the following narratives:

"Also, teachers and some students do generalise wrong doing of one student with VI to all of us. What I mean is let's say a student with VI does something

that deserves punishment, the teachers wouldn't punish him or her but would instead generalise the wrong doing to all of us by saying something ''oh students with VI die3 that is how they are'' this statement really demoralising to me and many of my colleagues" **(Student 2).**

"Let's say that you something wrong, our sighted colleagues will go about campus saying visually impaired students are like this are like that meanwhile it could just be one of us who did that wrong. When I hear things like that, I feel bad and don't feel like getting close to some sighted colleagues or some of these teachers who pass such comments" **(Student 7)**

Discrimination in social clubs

SVI expressed dissatisfaction with how they are discriminated against when they join social clubs on campus. Their lamentations are captured in the following narratives;

"Sometimes if you join some student's association or clubs, they don't want to give you a role. Either leadership role other responsibilities. Maybe they think the visually impaired students are not capable enough. This form of discrimination of our sighed mates is not fair enough" **(Students 6)**

"I join the debaters club and instead of giving me the chance to participate in a debate they were not doing that I had to complain several times before I was given the chance to debate. And my first performance was excellent from then they started respecting me in the club" **(Students 4).**

Physical environmental challenges Students with Visual Impairment face

In response to research question "What are the physical environmental challenges Students with Visual Impairment face in the Okuapeman Senior High School?" One major theme Physical environmental challenges emerged

with several sub-themes. These sub-themes are, inaccessible places within the school, poor roads and open gutters and stones.

Inaccessible places within the school

SVI explained that there were some places within the school environment that are not accessible to them. The following quotes captured their narrations.

"There are some buildings that are very accessible, the braille library is one. But there some places within the campus that are not accessible. The classes called the down classes are not accessible, they are not disability friendly. The staircases of some buildings are too steep and sharp" **(Students 7).**

"There are some places that are not accessible in the school for example places like the down classes, the bathroom and tap. The road to the down classes is slippery and the steps are not good the road to the down classes are slippery and the steps are not good at where the tap and bathrooms are. If you are VI students you can easily fall if you are not helped to move in those areas". **(Student 4)**

Poor roads

Poor nature of roads within the school environment emerged one of the physical environment challenges facing SVI. According to the SVI, these challenges are negatively affecting their movement on campus. The views of a student and a teacher are shared below:

"As you can see the environment in itself is not conducive, see these bad roads how can a person visual impairment really move on this road? And the areas are not paved. Even with the white cane, movement around campus is really

difficult for us. Something need to be done about the bad nature of our roads" **(Student 3)**

"The road is very bad and some paths are dusty too. This is really not good for our students with visual impairment" **(Teacher 5)**

Gutters and Stones

It came to light that one of the environmental challenges facing SVI in the school were the presence of open gutters and stones. These responses according to the participants often time led to falls and hurt of SVI on campus. Participants had these to share:

"There are gutters all over. And the gutters are not covered too. Sometimes you might not see the edges well and when it is in the night you might fall within the gutters. Recently I fell into the gutter at the tap area when I went there at night to fetch. There are gutters round the bathroom area too" **(Student 6)**

"It is very difficult because of the gutters and stones over the campus. Recently I hit my leg against a stone. Because of the presence of stones in school, often time visually impaired students hit their legs against stones. Our shoes often get spoilt as a result and we get hurt too". **(Student 5)**

"There are gutters around. At times you will hear or see students with visual impairment falling here and there" **(Teacher 2)**

Attitudinal challenges students with Visual Impairments face.

In response to the research question "What are the attitudinal challenges students with visual impairments face at Okuapeman Senior High School", one major theme attitude impediment emerged with sub-themes. These sub-themes are labelling, verbal abuse and rude attitude.

Labelling

Labelling emerged as attitude that was displeasing to the SVI. According to them their sighted colleagues call them by their condition instead of their names. Two of the SVI explained this issue as:

"Our sighted colleagues when you are coming in their direction, they will say the say the visually impaired students are coming and when you do something too, they say visually impaired have done this or that meanwhile they know our names and could have just mention our name but they chose to label us by our condition" **(Students 6)**

"Also, some of them do label us which is not good. For example, let's say you are walking and some sighted colleagues see you on the way, instead of saying that give Abena or Joe the way, they will instead label you and say give the blind student a way" **(Students 3)**

Verbal abuse

According to the SVI who participated in the study, the passage of unpleasant words by some sighted students to them was verbal abuse. These views are emotionally expressed as follows;

"... when some of our sighted colleagues realise you have form friendship with male sighted students, they tend to say unkind words about you. For example, I had a male friend who is sighted and some sighted female students will be like how can a handsome sighted student have a blind girl as a friend. These words are unkind but for me it is normal when people use it on me because I have become used to them" **(Student 8)**

Other students shared their views as

"Sometimes, people will not open their mouth to insult you but the subtle unkind words they pass on is emotionally abusive. If you say these visual impaired students can worry or they are someway it is unkind and abusive to me" **(Student 5)**

"Some students and teachers verbally abuse us, for example when you tell me that I know nothing except talking about sexual immorality that is a verbal abuse to me. It affects me and my emotional and mental health" **(Student 4).**

Rude attitude

The way other students communicate and relate to SVI means a lot more to them. From their views some students showed some rude attitude to them which affect their interpersonal relationship with them. The views of some of the participants are captured in the statements below:

"Let say you are fetching water and you need help. When you call some sighted students help you at times the responses, they give is very rude. Sometimes you will expect that they talk to you in a cordial way and tell you oh Ama I am running late can you kindly let Kofi help you instead? Not all of them will talk to you nicely some will just burst out of anger and talk to you anyhow. These rude attitudes badly affect our interpersonal relationship with others" **(Student 6)**

*"Because this is the first time some sighted students are living with students with visual impaired students, they find it difficult to live comfortably around us. Some of them really are rude to us from the beginning. Maybe they think visual impairment is infectious. But as time goes on, they become use to us"***.**

(Students 1)

"I realised the negative we receive is most from form students. Maybe it is because this is the first time most of have personally come into contact with visually impaired students so they may have all manner of misconceptions about us and our condition" **(Student 1)**

Discussion of Findings

Academic Challenges Students with Visual Impairment Face

Overall narrative by participants or finding on the academic challenges facing SVI shows that there were challenges in the inclusive school environment that needs to be addressed. Several barriers such as reading and writing difficulties, inadequate learning materials, high cost of learning materials, inadequate number of classrooms, delay in release of examination results, inadequate number of resource teachers and teaching approach of some teachers were identified as academic impediments facing SVIs in the inclusive school. Thematic analysis of data gathered shows that teachers have difficulties when reading transcripts of the SVI. The unavailable of textbooks in braille was found to pose reading difficulties for SVI. Inadequate learning materials was found to include shortage of braille materials, embossed textbooks. The inadequate learning materials was found to be as a result of high cost of these materials in the market. The result of this study is in conformity with a 2017 study conducted by Otyola et al. (2017), showed that VI students experience numerous obstacles in reaching their academic goals which includes reading difficulties, a lack of equipment, isolation, a shortage of text books, movement difficulties, and tuition fees. This agrees also with Nanor, Poku-Boansi and Adarkwa, (2021) who found that lack of braille and

audio books was a recurring concern when it came to the teaching and learning experience of SVI.

The result also corresponds with an earlier study by Agesa (2014) which discovered that most visually impaired students performed poorly in school due to a lack of execution of the inclusive curriculum and lack of learning materials to implement to implement the inclusive school. According Agesa (2014), this can be attributed to economic factors because of the wide range of demands of students with visual impairments. The challenges found above with regard to academic impediment of SVI can be seen to be interlinked to each other. Difficulties in reading is linked to lack learning materials which also linked to high cost of these learning materials. As explained by Agesa (2014) most of the academic challenges faced by SVI inclusive schools has economic implications. In an attempt to address the issues, the financial issues should be given careful attention.

Others challenges were teacher related. This includes delay in the release of examination result of SVI, inadequate number of resources teachers in the school and teaching approach used by teachers. While the delay in the release of results for SVI was said to be due to inadequate number of resource teachers who did the braille transcription, teachers might adopt other examination approach such oral test to access the performance of SVI. The fact that some teachers write on boards at times without explaining to SVI in the classroom was found to a challenging academic experience in the classroom. This finding shows that some teachers fail at times to accommodate SVI during their lesson delivery. It is however, important for teachers specially those teaching in mainstream schools with SVI to adapt

teaching approaches that would not only accommodate but also get SVI involved in their lesson delivery.

A study by Temesgen, (2018) found similar result. SVI in the Temesgen study lamented that teacher discreetly writing notes on blackboards during instructional hours. This according to them excluded SVI from what is being written on the board. In the study of Lopez-Gavira et al., (2021) students with disabilities believed that faculty members should adapt teaching strategies and evaluation processes such disability friendly exam formats, timing, use of technology and flexible scheduling in order to support their inclusion. This very important because with the recent talk of inclusive education, teachers are the major key implementors of the inclusive education policies in the classroom. It is therefore imperative that they always use teaching approach that accommodate the learning needs of SVI. Brydges and Mkandawire (2017) and Lamichhane (2017), found that some teachers were not aware of how to teach SVI however they later found accommodative approach such encouraging peer tutoring, asking peers or friends of students with SVI to help them with dictating notes, teaching difficult ideas, or moving around the school campus. Teachers at Okuapeman SHS and other inclusive schools in Ghana may adopt such approach to deal with the academic challenges SVI were found to face in this study.

Social Challenges Students with Visual Impairment Face

From the responses accrued from the participants, it became evident that SVI were not fully integrated into all social activities in the school. The challenges found to be existed in the school with regard to social inclusion of SVI were segregation at social gatherings, non-involvement in some sports

activities, attribution of wrongdoings, discrimination in social clubs and friendship is a burden. The finding points to the fact that SVI were not fully included in social programmes and activities in the school. For sports activities it was found that the full inclusion of SVI is not been possible of lack of specialised equipment. For sports discipline such as athletics it did not require sophisticated sports equipment and machines to set up the running tracks so that were done for SVI to participate in. However, for games such basketball, football, hockey and other accommodation were not been made yet for SVI participation.

The finding also revealed that SVI were segregated during social gatherings. They were often given separate places to sit although responses from some SVI participants suggest that they would have preferred to sit among the sighted students. Reasons given by teachers was that SVI were given special places to sit in social gatherings because the school want to prevent a situation where SVI will be lost in the crowd during social gatherings or be struggling over seats with their sighted colleagues. There appear to be a dichotomy here. While the school management and teachers thought they were putting in measures in place to make social events comfortable for SVI, the SVI themselves on the other hand see that as a form of social segregation from their peers. According to a study by Lazarus et al., (2018), SVI do not engage in a broad variety of play behaviours, games and have poor social interaction skills. This affects their abilities to form social connections with their peers, teachers and sometimes family members (Lazarus et al., 2018). From the finding of this study, possible explanation of SVI not engaging in social activities and play behaviours is the fact that they

could have perceive the social environment or gathering as not welcoming. In the case of this study, it was found that SVI found the social gathering environment as a place where they are segregated or excluded so they may not be comfortable going to such places. For sports activities lack of specialised equipment for SVI could be one of the reasons why SVI may not have the enthusiasm to participate in social games.

The finding also revealed some factors that negatively affect the formation of social bonds and friendship among SVIs. These were attribution of wrongdoings and seeing friendship with SVI as a burden. According to SVI their sighted counterparts attributes the wrongdoings of all SVI to all them which came a form of stigmatisation. Also, the finding showed that SVI lack friendship with their sighted colleagues. Finding showed that sighted students were willing to help SVI but not ready to befriend SVI. This finding is rather disturbing because lack of friendship of students with disabilities as found by de Verdier (2016), can lead to loneliness. Lamoureux and Keeffe (2008), SVI have less peer relationships, either in or out of school, than their sighted peers, resulting in fewer chances to develop social skills. Meeting the socio-emotional needs of SVI is important to help them develop both social and academic skills, thereby increasing their possibilities to be successfully included in the school activities. In agreement of the above, Dix et al., (2012) found that healthy socio-emotional development, a sense of well-being, and good social competence are necessary for students to be prepared to learn and master different tasks and situations in school.

This therefore implies that healthy social environment is a precursor to the overall academic successful of SVI in an inclusive school. The social

challenges found in this study which includes segregation at social gatherings, non-involvement in some sports activities, attribution of wrongdoings, discrimination in social clubs and friendship is a burden are not good precursors for social development and academic success of SVI. These challenges must therefore be addressed. According to Vygotsky's sociocultural theory of learning, people learn through social interactions. Vygotsky (1978), implied that learning in humans is mostly a social process and that our cognitive abilities are established via encounters with others who are more experienced than we are. This theory suggests that our human psychological and intellectual development is influenced by others. Obstacles preventing the social interactions of SVI such those found in this present study which includes segregation at social gatherings, non-involvement in some sports activities, attribution of wrongdoings, discrimination in social clubs and seeing friendship with SVI as a burden should be immediately addressed to promote social interaction between SVI and their sighted counterparts.

Physical Environmental Challenges Students with Visual Impairment Face

The research questions "What are the physical environmental challenges students with visual impairment face in the Okuapeman Senior High School?" sought to find out the physical environmental challenges SVI face in the inclusive school. It emerged from the study that inaccessible places within the school, poor roads and open gutters and stones are the physical environmental challenges facing SVI. These physical environmental challenges placed limitation the mobility and movement of SVI on campus. This revelation is confirmed by the work of Temesgen, (2018), which found

hastily built poles, exposed ditches, stone hips, materials left on some walkways as the primary hurdles for SVI. This hurdles according to Temesgen (2018) prevent SVI from studying with their peers and participating in social events outside of the classroom. The finding also confirms recent findings of work of authors such as Amin et al et al., (2021), Odame et al., (2021) and Vanderpuye et al., (2022). These studies also found that SVI have physical accessibility difficulties in their schools.

While the nation strives to achieve inclusive education, it is important stakeholders look at the design of the physical school environment and how it will be disability friendly. The design for learning (UDL) model offer useful direction for the design of physical environments that are accessible all learning including SVI. The model suggest that educational institutions should offer inclusive, equitable, and non-discriminatory learning opportunities for all students and that includes accessible physical environment. By adopting the UDL model in providing inclusive education for SVI inclusive school environments, we must model the UDL concepts when designing physical infrastructure projects in the schools that are scheduled to run inclusive education programmes.

Attitudinal Challenges Students with Visual Impairments Face

The research question "What are the attitudinal challenges students with visual impairments face at Okuapeman Senior High School? sought to find out the attitudinal challenges facing SVI in regular schools. From the findings, labelling, verbal abuse and rude attitude emerged the attitudinal challenges facing SVI in the Okuapeman SHS. Labelling emerged as attitude that is displeasing to the SVIs. According to them their sighted colleagues call

them by their condition instead of their names. The verbal abuse comes in subtle form through the use of unkind and unpleasant words to SVI. Rude attitudes come in many forms which meres the interpersonal relationships between SVIs and their sighted counterparts. Some teachers and students were found to expressed anger when it comes to giving helping hands to SVI in some situations. According to a study by Chhabra et al. (2010), the attitude of teachers and students to students with disabilities is likely to be influenced by their perception of inclusive education.

Teachers who have negative attitude about inclusive, unprepared and afraid to work with students with disabilities in regular classes, may express irritation, anger, and unfavourable attitudes about inclusive education because they believe it will result in poorer academic standards of students with and those without disabilities. Teachers and students with these perception about inclusive education may show anger or irritation at the least interaction with SVI and may not be ready to accommodate SVI. In the case of participants of these studies, SVI voiced that some sighted students and teachers were initial rude, label them and use unkind and unpleasant words on them but as they stay in the schools over the years, they become acquainted with everyone in the school and the negative attitude change. One the part of sighted students who show negative attitude to SVI, the SVI who participated in the study voiced that the negative attitude they experienced are mostly from form students and this they explained could be due to the reason that most of this form one students prior to admission to the school have not lived with SVI before so they had a number of misconceptions about disability and visual impairment.

A similar finding was found by Asamoah et al. (2018) which found negative perception and attitude of sighted towards inclusive education and students with visual impairments. The reason for this negative attitude toward SVI was found to be the perception held by sighted students that inclusive education slows learning speed and academic development is hampered for Students without VI in inclusive school. Although this view of sighted students confirmed by Asamoah et al et., (2018) and Agbenyega (2007), strategies can be used by teachers in the classroom to ensure both students benefit from the instructional period. The attitude of sighted students, teachers and other staff in the school can create the enabling environment for SVI to form social bonds, build friendship that will propel academic success. Effort should therefore be taken to address negative attitude been shown the SVI in the school.

Chapter Summary

The findings of this study were analysed and discussed in this chapter. Several barriers such as reading and writing difficulties, inadequate learning materials, high cost of learning materials, inadequate number of classrooms, delay in release of examination results, inadequate number of resource teachers and teaching approach of some teachers were identified as academic impediments facing SVIs in the inclusive school. The challenges found to be existed in the school with regard to social inclusion of SVI are segregation at social gatherings, non-involvement in some sports activities, attribution of wrongdoings, discrimination in social clubs and friendship as a burden. It also emerged from the study that inaccessible places within the school, poor roads and open gutters and stones were the physical environmental challenges facing

SVI. Finally, labelling, verbal abuse and rude attitude emerged the attitudinal challenges facing SVI in the Okuapeman SHS. The implications of the findings were discussed in relation to relevant literature.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter summarises the study's findings, conclusion, recommendations made for consideration, and areas for further research.

Summary

This study sought to find the school challenges facing students with visual impairment (SVI) at Okuapeman Senior High School. Specifically, the study sought to find the academic, social, physical, environmental and attitudinal challenges SVI faced in the school. This was a qualitative study employing a case study design. The interview guide was used to collect the data from 20 participants, which consisted of 10 SVI, five teachers, and five administrative staff. Each interview covered an average period of 25 to 30 minutes per participant. The interview data were transcribed and coded, with emerging codes categorised into themes and sub-themes and analysed using thematic analysis by Braun and Clarke (2019). Four significant themes with 18 sub-themes emerged from the participants' responses.

Key Findings

1. Several barriers such as reading and writing difficulties, inadequate learning materials, high cost of learning materials, inadequate number of classrooms, delay in the release of examination results, inadequate number of resource teachers and teaching approach of some teachers were identified as academic challenges facing SVIs in the inclusive school.

2. The impediments found in the school regarding the social life of SVI were segregation at social gatherings, non-involvement in some sports activities, attribution of wrongdoings, discrimination in social clubs and sighted students seeing friendship with the SVIs as a burden. The finding points to the fact that SVIs were not fully included in social programmes and activities in the school. For sports activities, it was found that the full inclusion of SVI is not possible because of a lack of specialised disability-friendly sports equipment.
3. The study showed that inaccessible places within the school, poor roads and open gutters and stones were the physical environmental challenges facing SVI. These physical environmental challenges limit the mobility and movement of SVI on campus.
4. From the findings, labelling, verbal abuse and rude attitude emerged as the attitudinal challenges facing SVI in the Okuapeman SHS, negatively affecting the interpersonal relationships between SVIs and their sighted counterparts.

Conclusions

Even though Ghana has been implementing inclusive education on a pilot basis since the 2003/2004 academic year, challenges still need to be addressed in the smooth take of the inclusive education policy in all schools. As found in this study, the challenges range from academic, social, physical, environmental and attitudinal challenges. Particularly for SVI, these challenges hinder them from accessing the physical environment and enjoying the socialisation that comes with campus life. They negatively impact their studies due to the need for more learning materials. While Ghana is still

piloting inclusive education in some selected senior high schools and planning to implement the policy in more schools, stakeholders ought to discover possible impediments that can negatively hinder the smooth rollout of inclusive education across the country. In doing that, the voice of the students who are the beneficiaries of the current inclusive education programme, teachers and administrators in the chosen school must be sought. This study has unearthed some of the challenges SVI faces in inclusive school settings. These challenges significantly affect the academics of SVI, their social life, mobility on campus and their interpersonal relationship with their sighted counterparts.

Recommendations

Based on the findings and conclusion of the study, the following recommendations are made for consideration;

1. It is recommended that the management of the school and parents appeal for financial support from the government and benevolent individuals so that they can resource the school resource centre with braille materials, computers and other learning materials that SVI need to ease difficulties they are facing with reading and writing. With the issue of an inadequate number of resource teachers, it is recommended that the school's management appeal to the Ghana Education Service to treat it as urgent to transfer more resource teachers to the school.
2. It is recommended that the sports section of the school find another type of sporting discipline that does not require specialised equipment to involve SVI. Again, SVI should be fully included in campus social activities and social clubs. During social and religious programmes,

SVI should be given roles to play. They should be regarded as active participants in social groupings, not passive attendants.

3. The Municipal Assembly should allocate funds to renovate and construct roads and pathways in the school. In an inclusive school such as Okuapeman SHS, it is recommended that all open gutters are reconstructed and covered so that the school environment can be made accessible for SVI.
4. Finally, it is recommended that education on disability issues be provided by the guidance and counselling unit for freshly admitted students. This will curb the negative perception and attitude towards SVI. Also, it is recommended that the education on disabilities rights goes beyond just orientation sessions and be included in the curriculum and SHS students as a topic. This way, the students will learn about disabilities and their roles to make the school, community, the nation and the world a better place for SVI and other persons with disabilities.

Areas for Further Research

It is recommended that further research be conducted to ascertain the school challenges students with other forms of disabilities face in inclusive senior high schools in the country. The findings of such research and that of this current study will help the government and stakeholders find appropriate ways to deal with the challenges likely to hinder the smooth takeoff of inclusive education in all districts and regions of the country.

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APPENDICES

APPENDIX A: CONSENT FORM

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Consent Form for a study on the topic: School Challenges Students with Visual Impairments Encounter in the Okuapemman Senior High School in the Eastern Region of Ghana.

General Information about the Research

Since the implementation of inclusive education started it has been met with numerous challenges that is affecting the academic progress of the very students with disabilities that the inclusive education sought to benefit. Challenges such as limited educational materials, human resources and infrastructure deficit has been found to impede smooth running of inclusive education (Lieberman, Haegele, Columna, & Conroy (2014); Lawal (2022) & Omede, 2015). In Ghana some studies have been done to explore the challenges students with VI faced. However, these studies tend to focus on VI students in tertiary institutions or those in Special schools like Akwapim School for the blind. For example, studies have identified various impediments to the inclusion of students with disabilities (Opoku et al., 2017; Opoku, Badu, Amponteng, & Agyei-Okyere, 2015). These includes lack of teaching and learning materials, resources and qualified teachers (Anthony, 2011; Gregorius, 2016; Nketsia & Saloviita, 2013). Vanderpuye, Nyame and Okai, (2022) also found physical environment, inordinate attitude of some members of the University community and unsupportive academic arrangements at the university as challenges faced by students with VI at the University of Cape

Coast. Inadequate lighting and crowded lecture halls also provide difficulties for VI students in attending and understanding lectures (Ampong 2001; Poku 2011). Whiles the above studies helped us to know the challenges being faced with students with VI, they tend to focus on students with VI in special schools and tertiary institutions. There seem to be an apparent lack of literature in the Ghanaian context on school challenges of students with VI in inclusive Senior High Schools in Ghana. With my personal experience at Okuapemman Senior High School, records I intercepted from the head of academic's office indicated that 2018 to 2020 many students with VI did not perform well in their academic work as compared to their sighted peers. The record shows that the performance of students with VI in the school in the West Africa Senior Certificate Examination (WASSCE) kept decreasing in recent years. Academic success can also be hampered by social, attitudinal and physical environmental challenges. There is therefore the need to explore the experiences of students with VI in senior high inclusive schools to find out the social, attitudinal, physical environmental and academic factors that impede their full inclusion and academic factors that affects their inclusion at the school. Because senior high school education serves as pivotal point in the educational attainment and criteria for accessing tertiary education in Ghana, it is therefore important that studies are carried out to identified these challenges so as it can be addressed.

Procedure

To find answers to the questions this study seeks to address, the researcher invites you to take part in this study. Semi-structured Interview will be used to collect the data from participants. Each interview will cover an average time

period of 25 to 35 minutes per participant. If you accept, you will be required to participate in an interview that would be conducted by the researcher at a place that would be convenient for you. The interview questions will cover your understanding of the issues relating social, academic, attitudinal and physical environmental challenges facing students with VI in Okuapeman Senior High School.

Possible Risks and Discomforts

There would be no realistic predictable risks or discomforts to the participants.

Benefits/Significance of the Study

The study will fulfill a major need for studies on inclusion of students with visual impairment in inclusive senior high schools in the country by providing data from which future educational policies on inclusion could be based in Ghana. This will help professionals in the field of special education, rehabilitation and disability studies and persons with VI in the Akuapem North Municipality as well as the general public to be aware of challenges of students with VI and ways by which they can all help to curb the challenges to promote inclusion and provide conducive learning for students with VI. Findings help the Ghana Education planners in designing of appropriate inclusive education programmes suitable to the needs of learners with VI**.** The results help to change the attitudes of the administrators, teachers, non-handicapped students in basic, senior high and tertiary schools and also the community at large towards the achievement and acceptance of students with VI in inclusive society. The study will also contribute to existing literature in Special Education especially on Inclusive Education of students with VI.

Confidentiality

The information you provide in this study will be kept safe and used only for academic purpose in the data analysis stage of the study. You are you are assured that; the researcher will protect all information about you and your identity or information shall not be revealed to any third party. The recorded interview, as well as the transcription, would be kept safe with the aid of a software called 'mylockbox app. This is to prevent unauthorised persons from having access to the information gathered and only the researcher would have access to it. Your name, identity will not be revealed in any reports.

Compensation

This study is solely for academic purpose. There is no compensation package either in cash or kind offered for participation.

Voluntary Participation and Right to Leave the Research

Your participation in this study is solely voluntary. You will have the right to withdraw from the study at any point in time when you feel uncomfortable with any of the interview questions being asked. There shall be no penalty if you choose to withdraw from the study.

Volunteer Agreement

The Purpose, methods, procedures, the benefits, risks and confidentiality clause for the research have been read and explained to me by the researcher. I have been given consent to participate in the study as a volunteer and would answer any question in the interview to my satisfaction.

Date …….

Signature of Participant……

APPENDIX B:

INTERVIEW GUIDE FOR TEACHERS

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

INTERVIEW GUIDE FOR TEACHERS

Interview guide for a study on the topic: Challenges Students with Visual Impairments Encounter in Inclusive Senior High Schools in Ghana: A Case Study of Okuapemman Senior High School in The Eastern Region.

Dear Participants,

Thank you for agreeing to take part in this study which seek to gather information on the topic: Challenges Students with Visual Impairments Encounter in Inclusive Senior High Schools in Ghana: A Case of Okuapemman Senior High School in The Eastern Region**.** The study is primarily for academic work, and therefore you are assured of confidentiality and anonymity in all the information that you provide. Thank you once again for your time and participation.

Section A: Background characteristics of Participants

To begin our discussion, can you please tell me a little about yourself?

Section B: Academic challenges students VI faced in inclusive schools.

i. Tell me about your academic challenges at the school

Probe (reading problems, use of school library, problem of taking exams, training and use of braille, availability of braille and materials, how teachers accommodate them during instructional hours, peer tutoring and group studies)

Section C: Social challenges students with VI face in inclusive school.

i. Tell me about your social experiences at the school

ii. What social challenges do you encounter in the school? **Probe** (Challenges with social interaction with peers, teachers and school administrators, participation in social activities (sports), entertainments, religious activities in the school)

Section D: Physical environmental challenges students with VI face in inclusive schools

i. Telling me about the challenges you face with regard to mobility and movements in the school

ii. How accessible is the route from your houses (hostels) to classrooms, assembly halls, dining halls, school administration etc.?

Section: E Attitudinal challenges students with VI face in inclusive schools

i. Describe the attitude of students, teachers and school administrators towards students with disabilities in your school.

ii. How do the students, teachers and school administrators welcome you at the school?

iii. Has there been an instance that a student, teacher or a school administrator refused to attend to your needs?

iv. Have you ever experienced any verbal/physical/sexual abuse from a student, teacher or school administrator in the school?

APPENDIX C

INTERVIEW GUIDE FOR TEACHERS

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

INTERVIEW GUIDE FOR TEACHERS

Interview guide for a study on the topic: Challenges Students with Visual Impairments Encounter in Inclusive Senior High Schools in Ghana: A Case Study of Okuapemman Senior High School in The Eastern Region.

Dear Participants,

Thank you for agreeing to take part in this study which seek to gather information on the topic: Challenges Students with Visual Impairments Encounter in Inclusive Senior High Schools in Ghana: A Case of Okuapemman Senior High School in The Eastern Region**.** The study is primarily for academic work, and therefore you are assured of confidentiality and anonymity in all the information that you provide. Thank you once again for your time and participation.

Section A: Background characteristics of Participants

To begin our discussion, can you please tell me a little about yourself?

Section B: Academic challenges students VI faced in inclusive schools.

ii. Tell me about your academic challenges at the school

Probe (reading problems, use of school library, problem of taking exams, training and use of braille, availability of braille and materials, how teachers accommodate them during instructional hours, peer tutoring and group studies)

Section C: Social challenges students with VI face in inclusive school.

iii. Tell me about your social experiences at the school

iv. What social challenges do you encounter in the school? **Probe** (Challenges with social interaction with peers, teachers and school administrators, participation in social activities (sports), entertainments, religious activities in the school)

Section D: Physical environmental challenges students with VI face in inclusive schools

iii. Telling me about the challenges you face with regard to mobility and movements in the school

iv. How accessible is the route from your houses (hostels) to classrooms, assembly halls, dining halls, school administration etc.?

Section: E Attitudinal challenges students with VI face in inclusive schools

v. Describe the attitude of students, teachers and school administrators towards students with disabilities in your school.

vi. How do the students, teachers and school administrators welcome you at the school?

vii. Has there been an instance that a student, teacher or a school administrator refused to attend to your needs?

viii. Have you ever experienced any verbal/physical/sexual abuse from a student, teacher or school administrator in the school?

APPENDIX D

INTERVIEW GUIDE FOR SCHOOL ADMINISTRATORS

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

INTERVIEW GUIDE FOR SCHOOL ADMINISTRATORS

Interview guide for a study on the topic: Challenges Students with Visual Impairments Encounter in Inclusive Senior High Schools in Ghana: A Case Study of Okuapemman Senior High School in The Eastern Region.

Dear Participants,

Thank you for agreeing to take part in this study which seek to gather information on the topic: Challenges Students with Visual Impairments Encounter in Inclusive Senior High Schools in Ghana: A Case of Okuapemman Senior High School in The Eastern Region**.** The study is primarily for academic work, and therefore you are assured of confidentiality and anonymity in all the information that you provide. Thank you once again for your time and participation.

Section A: Background characteristics of Participants

To begin our discussion, can you please tell me a little about yourself?

Section B: Academic challenges students VI faced in inclusive schools.

iii. Tell me about the academic challenges that your students with VI face in the school.

Probe (reading problems, use of school library, problem of taking exams, training and use of braille, availability of braille and materials, how teachers

accommodate them during instructional hours, peer tutoring and group studies)

Section C: Social challenges students with VI face in inclusive school.

v. Tell me about the social experiences your students with VI face in the school

vi. What social challenges do you observe your students with VI encounter in the school? **Probe** (Challenges with social interaction with peers, teachers and school administrators, participation in social activities (sports), entertainments, religious activities in the school)

Section D: Physical environmental challenges students with VI face in inclusive schools

v. Telling me about the challenges your students with VI face with regard to mobility and movements in the school

vi. How accessible is the route from the houses (hostels) to classrooms, assembly halls, dining halls, school administration for your students with VI?

Section: E Attitudinal challenges students with VI face in inclusive schools

ix. Describe the attitude of students, teachers and school administrators towards your students with disabilities in your school.

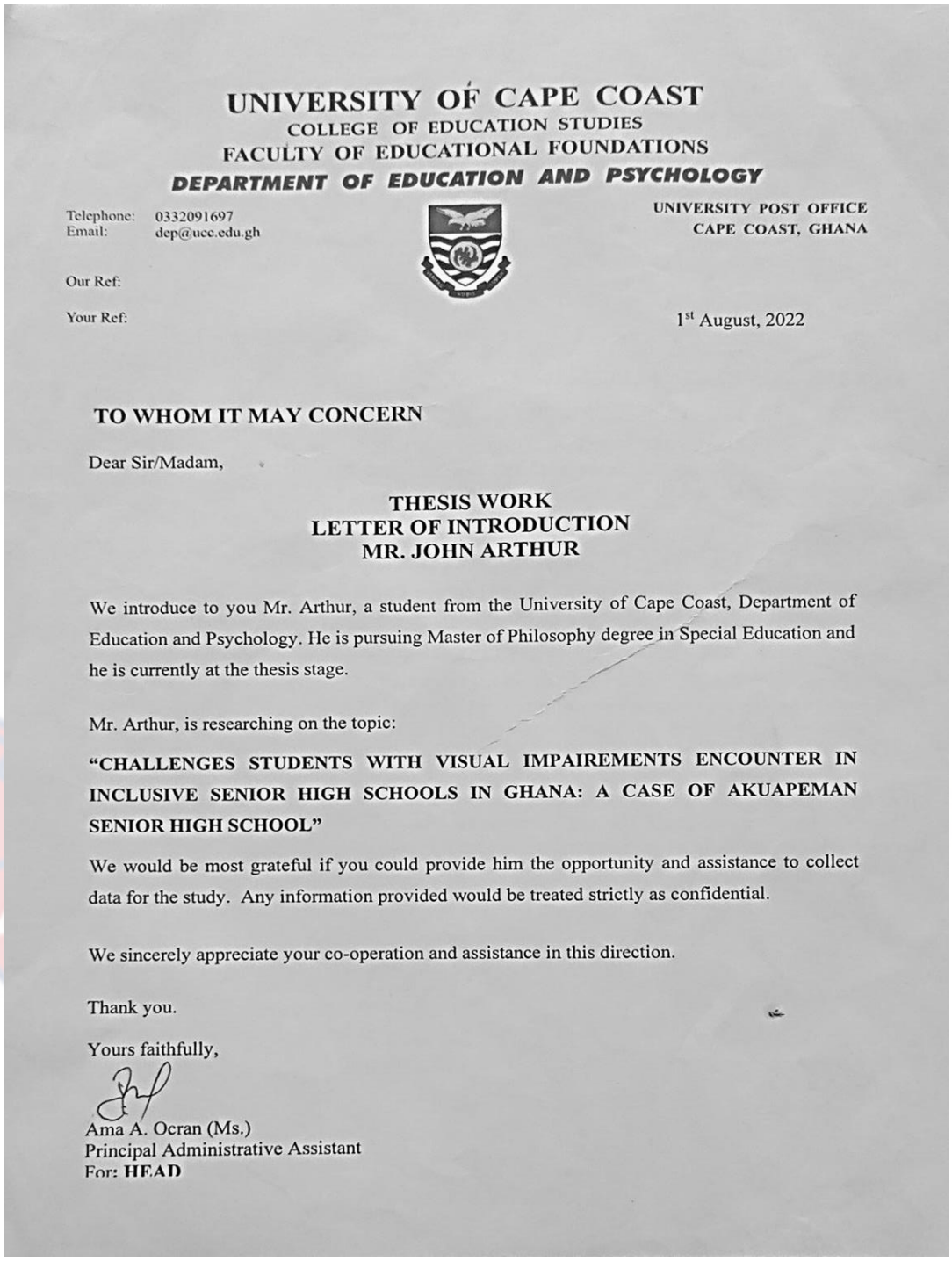
x. How do other students, teachers and school administrators welcome your students with VI at the school?

xi. Has there been an instance that a student, teacher or a school administrator refused to attend to the needs of VI?

xii. Have you ever heard or observe any verbal/physical/sexual abuse from a student, teacher or school administrator in the school towards a student with VI in the school?

APPENDIX E

INTRODUCTORY LETTER



UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS
DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Telephone: 0332091697
Email: dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

1st August, 2022

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION
MR. JOHN ARTHUR

We introduce to you Mr. Arthur, a student from the University of Cape Coast, Department of Education and Psychology. He is pursuing Master of Philosophy degree in Special Education and he is currently at the thesis stage.

Mr. Arthur, is researching on the topic:

"CHALLENGES STUDENTS WITH VISUAL IMPAIREMENTS ENCOUNTER IN INCLUSIVE SENIOR HIGH SCHOOLS IN GHANA: A CASE OF AKUAPEMAN SENIOR HIGH SCHOOL"

We would be most grateful if you could provide him the opportunity and assistance to collect data for the study. Any information provided would be treated strictly as confidential.

We sincerely appreciate your co-operation and assistance in this direction.

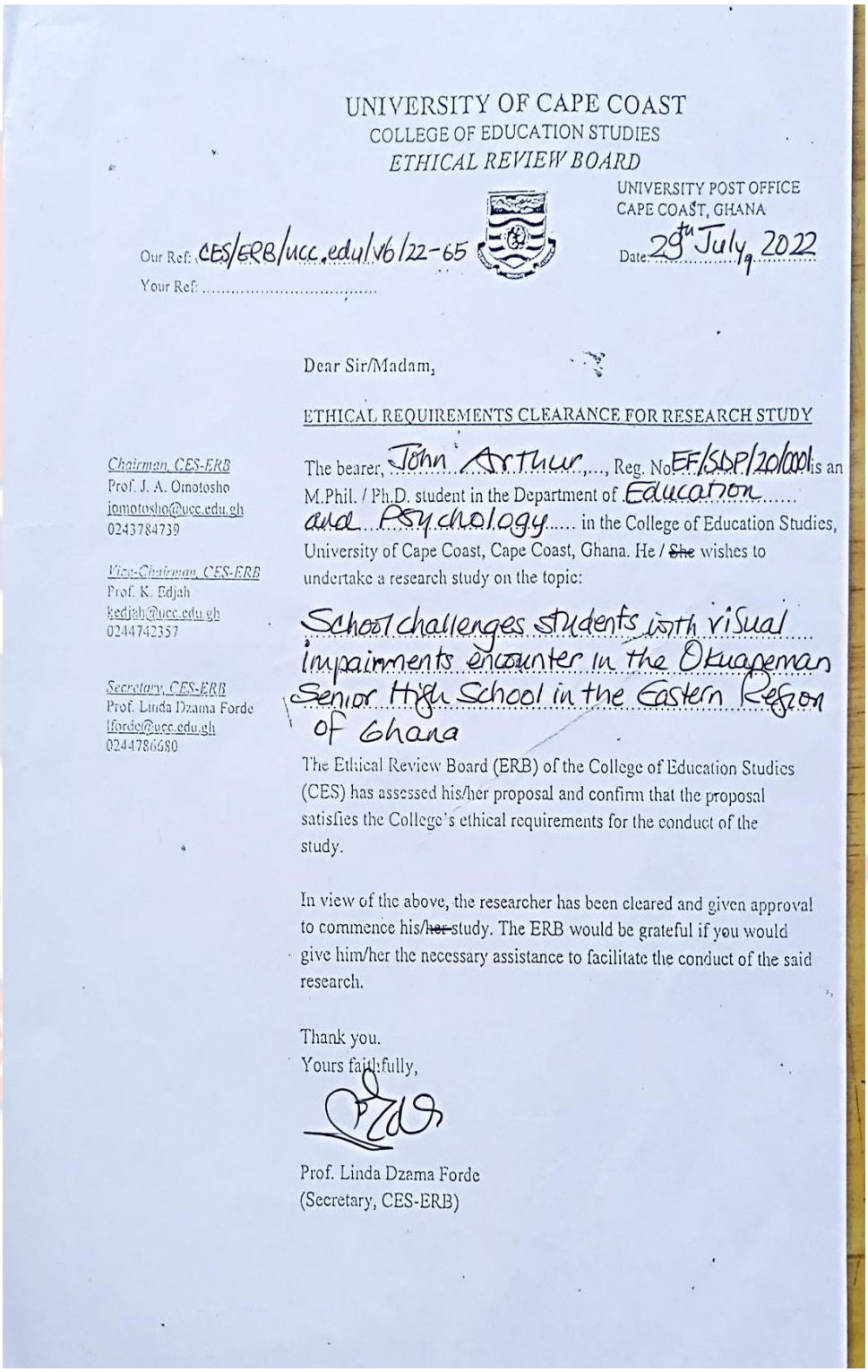
Thank you.

Yours faithfully,

Ama A. Ocran (Ms.)
Principal Administrative Assistant
For: HEAD

APPENDIX F

ETHICAL CLEARANCE



UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES/ERB/ucc.edu/V6/22-65
Your Ref: .....
Date: 29th July, 2022

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

Secretary, CES-ERB
Prof. Linda Dzama Forde
lforde@ucc.edu.gh
0244786580

The bearer, John Arthur, ..., Reg. No EF/SDP/20/0001 is an M.Phil. / Ph.D. student in the Department of Education and Psychology ..... in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. He / ~~She~~ wishes to undertake a research study on the topic:

School challenges students with visual impairments encounter in the Okuapeman Senior High School in the Eastern Region of Ghana

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed his/her proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given approval to commence his/~~her~~ study. The ERB would be grateful if you would give him/her the necessary assistance to facilitate the conduct of the said research.

Thank you.
Yours faithfully,

Prof. Linda Dzama Forde
(Secretary, CES-ERB)