School Environment and Inclusive Education of Learners with Visual Impairment in Secondary Schools: A Case of Selected Secondary Schools in Gulu City, Uganda

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A Dissertation Submitted to the Institute of Research and Graduate Studies in partial Fulfillment for the Award of a Degree of Master of Education in Curriculum Studies from Gulu University

January, 2024

Declaration

I **Martin Okete** 20/U/2676/MFC/PS declare that the topic "*School Environment and Inclusive Education of Learners with Visual Impairment*" in Gulu City A Case of Selected Secondary Schools in Gulu City is my original piece of research work and has never been submitted for the award of degree in any institution of higher learning.

Sign..... Date...12:1:2024.

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Approval

This is to certify that the research report entitled "School Environment and Inclusive Education of Learners with Visual Impairment in Gulu City" was written under our guidance and supervision as appointed supervisors.

..... Date..January 12, 2024

Dr. David Monk (PhD)

..... Date..15/01/2024

Mr. Opio George

Dedication

This dissertation is dedicated to my Son Cyprian Rwot-omiya Okete. May it be a source of inspiration to shape your destiny and spur you to greater academic heights.

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Abstract

This study examined the influence of 'the school environment on inclusive education for learners with visual impairment in Gulu City, a case of Bar-edge-Layibi Division. The objectives of this study as mentioned below. i) To assess the status of the school environment for inclusive secondary schools in Gulu city for people with visual impairment, ii) To examine the level of inclusive education for visually impaired learners in secondary schools in Gulu city and iii) To establish the relationship between school environment and inclusive education of learners with visual impairment. This study consisted of all the teachers in selected secondary schools in Gulu City, all head teachers in selected secondary schools in Bar-edge Layibi division Gulu City, all learners in selected secondary schools in Bar-edge Layibi Gulu City, all heads of department special needs in secondary schools in Bar-edge Layibi division Gulu City and visually impaired learners. Data was collected using four methods namely; individual in-depth interviews, self-administered questionnaires, and document analysis were used to gather the information required for this research. The findings regarding the physical environment indicated that it was suitable for promoting Inclusive Education. Furthermore, Leven's test revealed that there was no significant variation in the condition of the physical learning environment.. Implying therefore that both schools have made visible efforts to ensure students with visual impairments are accommodated in the school environment. Similarly, the Social learning environment was a significant factor in determining Inclusive education for learners with visual impairment with a t-test value ($t = 0.094$, $p > 0.05$). The findings indicated that there were no notable disparities in the state of the social learning environment within schools. On the level of inclusion among the visually impaired learners, Study findings revealed that the level of inclusion of learners with visual impairment was not significantly different in the two inclusive schools ($p<0.01$), in terms of context. While the values were statistically significant for resources and the process of Inclusion. Implying therefore that resources are important for learners with visual Impairment. On the relationship between school environment and inclusive education, the study findings revealed that there is a strong statistically significant correlation between School Environment (Physical and social) and Inclusive Education (Context, Resource & Process). In conclusion, the study therefore concludes that the success of Inclusion for Learners with Visual Impairment is dependent on the learning environment (Physical and social). Therefore, the school environment (Physical and Social) are important antecedent for Inclusive Education. We recommend that Government policymakers and the school system uphold Inclusive Education virtues (Context, Resources, and Process) to enhance learning for all learners besides, the Government should invest heavily in a social learning Environment which was found to be a strong predictor of Inclusive Education.

Chapter One

Introduction and Background to the Study

1.0 Introduction

Inclusive education is a new educational philosophy and a worldwide reform strategy intended to include students with different abilities in mainstream regular schools to achieve education for all (Baun, 2020). However, there is a serious concern for the total inclusiveness of visually impaired children in Uganda. Recent studies have shown that learners with visual impairment comprise the highest percentage among learners with exceptionalities and yet little is known about how they access, participate, and succeed in education and their societies. For instance, Byamukama and Tumwesigye (2020) have highlighted the challenges faced by visually impaired learners in Uganda, including lack of assistive devices, inadequate infrastructure, and negative attitudes towards disability, and suggested strategies to improve their access and participation in education. The Ugandan government has made progressive attempts towards providing education for all, but due to resource constraints, little has been done about the quality of the learning environment which has been found to have significant implications for the academic achievement of all learners, including those with visual impairment (Saalvik & Saalvik, 2018). Further guidance on inclusive education policies and practices for learners with disabilities in Uganda has been provided in UNESCO's report published in 2019. The report addresses the challenges faced by learners with visual impairment and other disabilities and gives recommendations to ensure inclusive education for all (UNESCO, 2019).

This chapter will present the background to the study, Problem statement, Purpose of the study, Specific objectives, Research questions, Significance of the study, Scope of the study, and Conceptual framework.

1.1 Background to the study

1.1.1 Historical background

The history of inclusive education can be traced to special needs education way back in the 20th Century. (UNESCO 1994) Special needs education was mainly concerned with placement for learners with disabilities in education and society and it was marked

by eras of development namely, the Era of exclusion, the Era of discrimination, the Era of asylum, and the era of special education (Muzaki,2020). During these eras people with disability were treated differently with the primary purpose of caring for them and custodial purposes.

The 17th-century industrial revolution in Europe brought in the manufacturing of assistive devices for persons with disabilities and it also ushered in special education because learners with disabilities were assisted with technology for instance the Braille machine for the blind (Tremblay, 2012). Special schools were established in Europe and America to facilitate education for persons with disabilities within special educational arrangements.

By the 18th century, the success of special schools gave birth to mainstreaming through an approach called Integration because special schools were seen to segregate students (Ahuja, 2005). In this approach, learners with special needs were brought into mainstream schools and classrooms. (Ainscow, 2005). Many scholars agree that integration was essential to inclusive education as it is understood today (Ahuja, 2005; Ainscow, 2005).

The clarion call made in Salamanca, Spain in 1994 gave birth to inclusive education, in that all the 92 countries present in the conference agreed to implement full inclusive education in their countries. This era of inclusion setting (Regular schools); is regarded as the modern era in which all learners, with or without disabilities can learn together in the same learning environment (Mangal, 2012; Tremblay, 2007; and Kisanji, 1999). Inclusive education in the postmodern era thus is a learning environment that includes every learner, celebrates differences, supports learning, and responds to individual needs (UNESCO, 1994; United Nations, 2014). From an inclusive education perspective there are four principles of inclusion, sometimes referred to as the 4A's scheme: accessibility, availability, acceptability, and adaptability (United Nations, 2014). These signify that learning institutions must make education accessible, available, acceptable, and adaptable for all learners (Pekeberg, 2012). Accessibility forms the basis for the precondition to a full realization of the rights and inclusion of persons with disabilities in society (UN, 2014), and is a fundamental right because it serves as a gateway to other rights (Greco, 2016).

The history of inclusive education evolved around issues of placement. Advocates of full inclusion believe that restricting students with disabilities from full participation in general education fails to serve their needs i.e. stigmatizing and deprives them of the rich and diverse academic and social opportunities found in general education (e.g. Gartner and Lipsky, 1987, Stainback and Stainback, 1992; 1996) It further asserts that separateness of special and general education continuum of special education placement options result in a fragmented, inefficient and costly service delivery system for children with special needs. In this, different divergent views have argued that the inclusion movement is based on vague and loosely defined models and driven by philosophical rhetoric rather than empirical research (Ainscow, 2005).

In June 1994 representatives of 92 governments and 25 international organizations formed the World Conference on Special Needs Education, held in Salamanca, Spain. They agreed on a dynamic new statement on the education of all disabled children, which called for inclusion to be the norm. In addition, the conference adopted a new Framework for action, the guiding principle of which is that ordinary schools should accommodate all children, regardless of their physical, intellectual, social, emotional, linguistic, and other conditions. All educational policies say the Framework should stipulate that disabled children attend the neighborhood school that would be attended if the child did not have a disability

In Africa, inclusive education has been led by South Africa. The nation has come a long way in putting laws and procedures in place to guarantee that students with disabilities have access to high-quality education. Important projects and advancements in South Africa include:

Legislation and policy framework: South Africa has a robust legal framework that supports inclusive education. Petersen, Joanisse, & Swart, (2013). The South African Schools Act of 1996 and the Education White Paper 6 on Special Needs Education have been instrumental in guiding inclusive education practices.

Mainstreaming approach: South Africa follows a mainstreaming approach, where learners with disabilities are encouraged to attend mainstream schools alongside their non-disabled peers. Wassermann, Ncube, & Harrington (2015). This approach is aimed at promoting social inclusion and equal opportunities for all learners.

Inclusive teacher training: South Africa has invested in training teachers to provide inclusive education. Teachers receive training on inclusive teaching methods, curriculum adaptation, and strategies to support learners with diverse needs.

Despite these efforts, challenges remain in fully implementing inclusive education in South Africa, including inadequate resources, lack of specialized support services, and attitudinal barriers. Deuba, & Preece, (2018) However, the country continues to work towards building an inclusive education system that ensures equal access and opportunities for all learners.

In Uganda, education for persons with visual impairments was mainly through special needs education, which started in 1952. The colonial government began providing separate special education services for a few children with visual, hearing, learning, and motor impairments since many children and youth with visual impairments were not benefiting from the existing educational provision (UNICEF, 2008). The Government of Uganda introduced inclusive education in 1997 through the universal primary education policy followed by the universal secondary education policy in 2007, through the disability act 2008, and the education act 2006/2008. In collaboration with the Ministry of Education and Sports, Kyambogo University conducted in-service training for teachers at the regional level to deal with learners with special educational needs in inclusive education. The Government of Uganda has formulated and enacted various policies and legislations to promote education for children with special education needs. For instance the constitution of Uganda objective xviii (ii) emphasizes the commitment by the state to afford every citizen equal opportunity to attain the highest educational standard possible Article 30 provides for the right to education for all and Article 32 further provides for affirmative action in favor of marginalized groups, including those with visual impairments. The Government of Uganda also enacted the National Education Policy 1992, the Person with Visual Impairments Act 2006, and the Universal Primary and Secondary Education Policy in 1997 and 2007 respectively. These articles, acts, and policies provide for equipping the learning environment to accommodate all learners irrespective of their capabilities (Musisi, 2014).

1.1.2 Theoretical Background

This study was guided by the social model of Disability postulated by the Union of the Physically Impaired against segregation (1976). This theory considers disability to be the problems disabled people face as a result of society's barriers rather than the person's medical conditions. It recognizes the solution as to rid of the barriers created by the society, rather than relying on curing all people who have impairments, which in most cases is not possible, (Paul & Hunt, 1996 cited in Ndinda, 2005). The duo argued that because people with impairments are viewed as "unfortunate, useless, different, oppressed and sick", they posed a direct challenge to the commonly held Western values. According to Paul and Hunt, (1996), they were viewed as "unfortunate". They are unable to "enjoy" material and social benefits of modern society, as "useless" because they are considered unable to contribute to the economic good of the community, and are marked as "minority group" members because they are perceived as "abnormal" and "different" (Ndinda, 2005).

The social model of disability encourages society to view the issue of including Persons with disabilities from a human rights and equality perspective rather than focus on their disability (Paul & Hunt 1996 cited in Ndinda 2005). The model views barriers that prevent People with visual impairments from participating in any situation as handicapping them. They are made to feel that it is their fault that they are different. According to Smith, Palloway, Patton & and Dowdy (2001), the cure to the problem of disability lies in the restructuring of the society and not focusing on the individual impairment.

This study considers the social model in favor of inclusive education. In an inclusive setting, it is the school's responsibility to re-adjust to meet the individual learners' needs but not the learners to adjust to meet the requirements. It is commonly known that students with disabilities face challenges in the educational system, low performance, unsatisfactory learning environments, and school dropout rates; these issues may be brought on by a comprehensive, rigorous, and inflexible curriculum (Ndinda, 2005). Low performance, however, can also be brought on by an unwelcoming educational climate for those with disabilities and inadequate resources. The idea that students' disabilities are the reason they have these issues is discouraged by inclusive education. Children with physical disabilities would experience fewer

psychological and sociological issues at educational institutions if they were in an enabling and supportive setting. This is because, in contrast to how society views disabilities, the social model theory of disability places more emphasis on the learner's strengths (Paul & Hunt cited in Ndinda, 2005). According to Barnes (2003), this model of disability views impairment as secondary to a greater awareness of the role that participation barriers in the environment play in contributing to disability. The school system should accommodate the needs of students with visual impairments in addition to making sure they meet academic requirements.

1.1.3. Conceptual Background

The physical surroundings, psychological or emotional states, and social and cultural influences that impact a learner's growth and development when they are involved in an educational endeavor are all considered to be part of the school environment, according to Hiemstra (1991). Within the context of the learning environment, this term encompasses elements of the educational process such as student cooperation, the language used by the teacher, the relationship between the teacher and the student, and teaching and evaluation methods. The notion that the term "environment" is quite broad and that everything we encounter can affect or occasion learning lends credence to the wider understanding of the phrase "learning environment." The study's emphasis was on the physical and virtual educational setting.

According to the Government of Uganda's 2005 Action Plan for Inclusive Education of Children and Youth with Disabilities (MoES, 2005), inclusive education is an approach that aims to meet all learners' needs, with a particular emphasis on those who are at risk of marginalization and exclusion. It suggests that all students—young people with and without disabilities—can study alongside one another by having access to shared early childhood education resources, schools, and community learning environments, together with a suitable support system. This is only achievable in an adaptable educational framework that takes into account the requirements of a wide variety of students and adjusts accordingly. It aims to make diversity acceptable to all parties involved in the system—parents, teachers, administrators, policymakers, and students—and to view it as a challenge rather than an issue. Nonetheless, a strong focus is placed on children and teenagers with disabilities as defined by the Persons with Disability Act (1995) and the National Trust Act (1999), even as the action plan outlines

its objectives and tactics. It is also possible to understand inclusive education as offering educational resources that are tailored to each student's needs, abilities, and limits.

1.1.4. Contextual Background

An estimated 15.7% of Ugandans are estimated to have some kind of visual impairment in 2021, according to predictions from the Uganda Bureau of Statistics (UBOS). Of them, 53% are men and 47% are women. The three disorders that cause vision impairment most frequently in Uganda are glaucoma, cataracts, and refractive errors. Approximately 5% of visually impaired children in Uganda attend school, according to a 2018 UNESCO evaluation.For kids with visual impairments, this lack of educational possibilities poses a serious obstacle because it restricts their prospects for upward social and economic mobility. Even while national and international development prioritizes addressing visual impairment Several publications, such as the National Development Plan (NDP II) 2015/16 and 2019/20, the Social Development Sector Plan (SDSP1) 2015/2016-2019/20, and others, address inclusive education and visual impairment. Individuals with visual impairments are among the most overlooked groups both in the public and private domains of policy. Significant obstacles stand in the way of the economic, political, social, and intellectual growth and well-being of the majority of people with visual impairments. Many of them face deprivations even within their own families, lack access to health care and education, and are marginalized in the national policy agenda (WHO, 2014). Individuals with visual impairments are systematically more likely than their classmates without disabilities to be excluded from school. According to UNESCO (2017), Ugandan disabled boys had the greatest out-of-school rate (34%) at lower secondary school age, while girls with disabilities have a higher primary school dropout rate (29%) than boys with disabilities. The system's failure to recognize and value each student's individuality is believed to be the main institutional cause of school dropout among students with special education needs. According to projections made by the Uganda Society of Disabled Children (2014), one-third of school-age children in Uganda are disabled. Despite the fact that a majority of students with special education needs, specifically 85%, could thrive in the educational setting with minimal adjustments, and 60% of all children with special needs could attend school without requiring any specialized accommodations, this

particular group of students represents the largest minority that leaves primary school prematurely and fails to complete their education (MGLSD & UNICEF, 2014).

The Ugandan government encourages the provision of both mainstream and special needs education as necessary to close the gaps in education. Additionally, the draft Education policy (2021) (MEOS, 2021) offers several methods for delivering special education. These include home-based care programs and special schools that provide specialized support through instructional materials, assistive devices, and teaching methodologies for children with severe and frequently multiple impairments. Additional options include inclusive schools, where students with special needs, including but not limited to those with visual impairments, learn alongside other students, and mainstream school units that specifically target students with certain types of visual impairments. Emphasis has been placed on developing inclusive education in Uganda; however, due to logistical and technical problems at all educational levels, this has not yet been realized. Children with special educational needs are enrolled in schools at a low rate, and their completion rate remains low even with interventions that appear to be cosmetic. According to UNICEF (2014) and NUDIPU (2009), just 6% of the estimated 2.5 million children with visual impairments are enrolled in secondary schools.

The circumstances in the Bar-edge Layibi division are the same as those mentioned previously. In general, the division has a large number of visually impaired children, some of whom are enrolled in schools. There is a dearth of information regarding the Bar-edge Layibi division's schools' suitability for visually impaired students.

1.2. Problem statement

Many nations' education policies specify how special needs students should be included and supported in mainstream classrooms to guarantee them access to resources and relevant, high-quality education. The Ministry of Education and Sports in Uganda views issues about special needs children as cross-cutting, and as such, development financing related to various departments is expected to support children with disabilities.

Whereas there have been attempts by the government to provide education to all learners including those with visual impairment little is known about how they access

schools (Mugaga, 2011), the level of participation in curricular and co-curricular activities is in the realm of the unknown (UNICEF, 2017), and general educational achievement is said to be poor (Eju, 2015) furthermore little is known about the learning environment and how it affects a learner with visual impairment in an inclusive education setting (Okurut Opolot, 2015) According to Ministry of Education and Sports (2020), obstacles that visually impaired students in Uganda face include low-quality instruction, a poor social and cultural environment, a lack of facilities, a lack of effective teacher-student interaction, and a lack of appropriate equipment. In addition, it is evident from the Ministry of Education's 2019 report that there is still work to be done to ensure that all children have access to and the realization of inclusive education in the nation. Despite having schools of visually impaired learners in Bar-edge Layibi division there are still many learners not enrolled in these schools. It is upon such background that this study investigated the influence of the school environment on the Inclusive education of learners with visual impairment in Bar-edge- Layibi Division, Gulu City.

1.3. General Objectives

The general objective of this study is to investigate the influence of the school environment on the inclusive education of learners with visual impairment in Bar-dege-Layibi Division in Gulu City.

1.3.1 Specific Objectives

i. To assess the status of the school environment for Inclusive Secondary Schools in Bar-edge Layibi Division Gulu city for people with Visual Impairment.
ii. To examine the level of Inclusive Education for visually impaired learners in Bar-edge Layibi Division Gulu City Secondary schools in Gulu City.
iii. To establish the relationship between the School Environment and Inclusive Education of Visually impaired learners in Bar-dege Layibi Division Gulu City.

1.4. Research Questions

The research will be guided by the following research questions to achieve the above objectives.

i) What is the status of the school environment in Inclusive Secondary Schools in Gulu City for learners with Visual impairment?

ii) What is the level of inclusion in Inclusive Schools for Visually impaired learners in Gulu City according to teachers, students with visual impairment, and head teachers?

iii) What is the relationship between school environment and inclusive education of visually impaired learners?

1.5 Scope of the study

Geographically, this study was conducted in Gulu City Northern Uganda. Gulu City is approximately 333 kilometers (207 mi), by road, North of Uganda's capital city, Kampala. Bar- The edge-laying division is in the Western part of Gulu City bordering the Laroo-Pece division from the East all the two divisions are geographically within Gulu city.

This study investigated the impacts of the school environment on the inclusive education of learners with visual impairments in Selected Secondary Schools of Bar-edge-Layibi Division in Gulu City.

The school environment was looked at as an independent variable in terms of the physical learning environment, and non-physical environment as operationalized by Heiman (1991). Inclusive Education was considered as a dependent variable in terms of context, resources, and processes

Time scope: this work including the data collection and writing was conducted from January-May2022-This period was chosen because it is the time that I am doing my master course. The research is timely inclusive education is becoming operationalized in Uganda.

1.6. Significance of the study

The study is expected to help the Ministry of Education and Sports to ensure that good policies on inclusive education of visually impaired learners are being enacted and implemented fully.

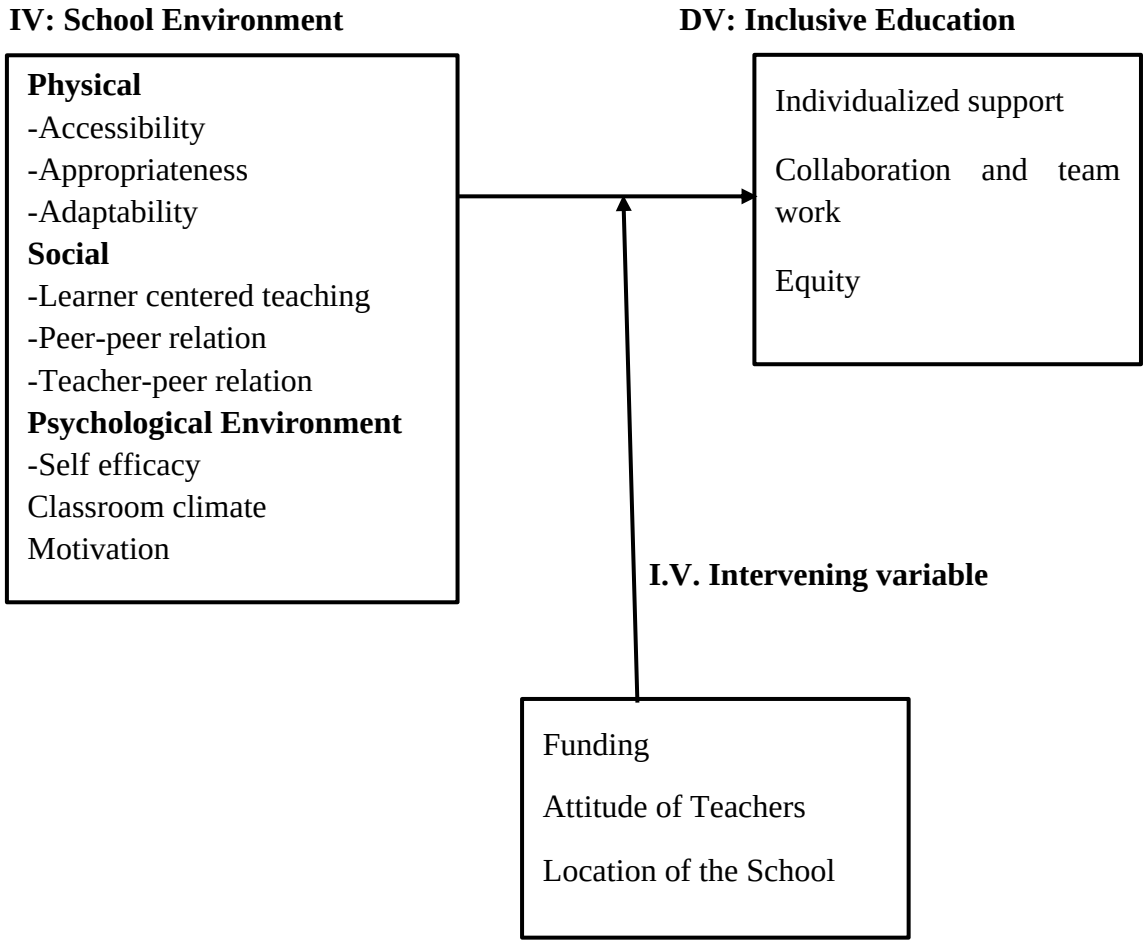
The findings are expected to be important to the National Curriculum Development Center to develop a good curriculum for learners with visual impairment, with consideration of the learning environment

This study adds to the existing knowledge of how school environments affect inclusive education services for learners with visual impairment.

Likewise, the study is expected to benefit educational planners as it will be one of the reference points to feed into their developmental plans to address the gaps in educational provisioning.

Furthermore, it shall be of interest to all public and private educational providers that are involved in ensuring equal opportunities, especially for Children with Disabilities (CWDs) in Uganda. The study is expected to be of significance in the generation of information that is to be fed into the current advocacy and lobbying activities taken by various stakeholders aimed at improving the study conditions of CWDs under the acclaimed all-inclusive education services.

1.7. Conceptual Framework



Source: *Adopted with modification from the Social model 1976.*

This study was conceptualized in terms of, and based on, the following conceptual frameworks: School Environment; and Inclusive Education.

The study specifically looked at the School Environment and Inclusive Education of learners with visual impairment in Secondary Schools. School Environment which is an Independent Variable (IV) is conceptualized as; a physical learning environment, psychological learning environment, and social learning environment. The Dependent Variables (DV) are conceptualized as; Individualized support, Collaboration and team work and Equity.

The intervening variables, which are defined as funding, teacher attitudes, and school location, have an impact on both the dependent and independent variables. These variables can arise at any point during discussions of inclusive education for learners with visual impairments and the school environment.

Chapter Two
Literature Review

2.0 Introduction

This section reviewed literature according to the study objectives namely; the status of the school environment for inclusive secondary schools in Gulu City; the level of

inclusive education for visually impaired learners and the relationship between School environment and inclusive education for visually impaired learners. The literature shall be reviewed based on the theoretical review.

2.1 Theoretical review

The social model of disability is a widespread belief viewed by scholars as a concept that people have limitations imposed on them by society. According to Morris (2019), the theory rejects the traditional medical approach to disability, which regards it as a personal misfortune or a medical problem caused by an individual's physical or mental state. Morris explains that the disability social model is essential in creating an inclusive environment free of social barriers, which promotes people with disabilities and law-abiding society. Goodley et al. (2019) support the social model of disability, stating that it is a product of disabling environments and the lack of adequate support for disabled individuals, as opposed to their impairments. The authors emphasize the need for an inclusive society and political initiatives that remove barriers and promote an enabling environment for people with disabilities.

The social model of disability has several tenets, including advocating for the rights of people with disabilities by addressing societal barriers promoting inclusion, and redefining the perception of disability. The proponents currently believe that the model challenges stigma and discrimination surrounding disabilities (McKenzie & McManus, 2019).

However, critics of the social model argue that it does not address various medical models of disability, addressing individual medical issues collectively and ignoring the diverse experiences and needs of disabled individuals. Hence, further research is necessary to unravel the model's implications on individual experiences and determine ways to integrate them effectively into perception (Goodley et al., 2019).

2.1. Status of School environment for Inclusive secondary schools

School environment refers to all the resources, technology, teaching means, learning structures, and global connections. The learning environment involves the human behavioral and cultural dimensions, which support students' learning (Yunusa &

Madudili, 2019). From the definition above, the School environment combines both the Social and physical environment. Shamaki (2015) observes school environments as a combination of many factors. These include painted and lit classrooms, the nature of seats, classroom quality, and air conditioning. These studies confirm that the School environment is multidimensional. Kamariddin, Zainal, & and Aminuddin (2009) showed that students who have access to a housing environment, parents' motivation, school, and teachers are motivated to perform better than those who lack these facilities.

One potential gap in the study was that the sample size was small (370). Due to the small sample size of the study, this limited the generalizability of the findings to other populations A larger sample size would allow for greater statistical power and would increase the confidence in the study's findings. Cross-sectional design: AS previously mentioned, another potential gap in the study is the use of a cross-sectional design. While cross-sectional studies can provide valuable insights into the associations between variables, they cannot establish causality. In contrast, longitudinal studies can track changes over time and examine the potential causal relationships between variables. Thus, future research might consider employing longitudinal designs to determine whether school environment factors influence student achievement over time and to identify the factors mediating these relationships.

Physical School environment

The school's physical environment has been found to affect students' productivity, mental health, and cognitive development (Ezike, 2018). Therefore, the locations of the school, the size of the class, workspaces, etc. are very important for academic performance (Roebuck, 2020; Chinujinim & Amaechi, 2019; Ezike, 2018). According to all of these research, learning and academic achievement are influenced by the physical surroundings. The study conducted by Duruji, Azuh, and Oviasogie (2014) elucidated the ways in which school facilities, class sizes, location, and plant design, together with aesthetics, maintenance culture, sanitary conditions, and conveniences, influence the learning and performance of secondary school students. The connection between important characteristics and the academic success of pupils with visual impairment in public schools was explored by Lansangani, et al. (2015). The authors found no significant relationship between school facilities like the library, canteen,

cafeteria, medical clinic, audiovisual center, guidance area, science laboratory, restrooms, and classroom facilities and academic performance.

According to Shazia & Mehren (2018), while students living in the housing facility are happy, their contentment is greater with the study space and security offered by the establishment than with the amenities and cleanliness. Nonetheless, it was discovered that the pupils with visual impairments' academic performance was unaffected by their level of happiness. Three environmental factors—temperature, noise level, and lighting—that affect academic performance in Mexico were examined by Realyvasquez-Vargas et al. (2020). The findings demonstrated that all three environmental factors, particularly those that were taken online, had a significant impact on the academic achievement of visually impaired university students. It was observed that the variables affected the comfort level, focus, and academic performance of the pupils. The authors claim that pupils who are happy with their living arrangements are more likely to exhibit obedient behavior. These studies also agree with (Okafor, Maina, & Stephen, 2016; Usaini, Abubakar, & Bichi, 2015; Baafi, 2020).

Much as a lot has been done on the effect of the physical environment on the learning of the visually impaired, the gaps to be addressed in the physical learning environment include accessibility of the classroom, appropriateness of the classroom, and adaptability.

Social Environment

There has been an increasing emphasis on intellectual learning at the expense of social, emotional, and cognitive learning. However, psychologists have realized that both psychological and cultural domains enhance cognition, memory, and other psychological constructs (Scholes, 2020). Children spend the greatest part of their life and time at school. Therefore, the very environment where they spend most of their time must have a bearing on their learning.

Although education has traditionally focused on enhancing students' intellectual abilities, recent research suggests that other domains, such as social, emotional, and cultural factors, can also influence learning outcomes. Scholes (2020) argues that neglecting these domains can limit the development of cognitive processes, such as

memory, attention, and reasoning that are crucial for academic success and personal growth. However, the nature and extent of these factors and how they interact with each other remain unclear, especially in the context of schools, where children spend significant amounts of time. Therefore, a comprehensive understanding of the non-physical environment in schools is essential for optimizing learning conditions and fostering students' holistic development. This literature review aims to synthesize the existing evidence on the effects of social, emotional, and cultural factors on cognitive processes, and to identify potential gaps and directions for future research in the field of education."

The non-physical environment that influences academic performance includes the curricula, the teaching techniques, and relationships (Bhavana & Achchi, 2018; Melesse & Molla, 2018), good teacher-student relationships (Usaini, Abubakar, & Bichi, 2015), peer relationships (Idongesit, 2020), school culture (Bektas, Cogalty, Karadag, & Ay, 2015). However, (Tus, 2020) argues that school culture is not significant in affecting the academic performance of high school students. This might happen in schools where the vision and mission are not clear to students; communication is blurred and inadequate motivation to students (Nzisa, 2014).

The physical and non-physical educational environment is crucial for fostering the learning process, according to empirical data. The environment that permeates the school serves as a constant source of inspiration for the students to keep learning. The rationale is that an academic environment imparts an intellectual mindset to students, and a dedicated study space furnished with books, journals, and conversations can foster this kind of mentality. The entire set of social, emotional, mental, and physical elements that contribute to the teaching and learning process in the classroom is referred to as the classroom environment (Ackar, 2016; Ezike, 2018).

According to a study by Gilavard (2016), which looked into how environmental elements affected elementary kids' learning and academic accomplishment, learning outcomes are significantly impacted by the learning environment. Open spaces in the school, noisy classrooms, erroneous board placements, and unsuitable classroom arrangements are all potential contributing factors that keep students from participating in class. The findings of a critical literature analysis demonstrated that primary school

students' learning and academic progress are negatively impacted by noise in educational settings, unsuitable coloring, illumination in learning spaces, and open spaces in schools. Therefore, when creating learning environments, education managers need to take the environment into account. If not, environmental noise may have a significant impact on students' learning and, consequently, their academic performance, something that prior research has not given much thought to.

Research has shown that noise pollution can significantly affect the academic performance of individuals, especially in environments like classrooms and libraries. However, there is still a gap in the literature concerning how noise affects the blind differently. Blind individuals rely heavily on hearing to navigate their environment, and noise pollution can have a significant impact on their ability to do so. A study by Tonelli et al. (2020) found that background noise can significantly impair the ability of blind individuals to perceive sounds, particularly in speech recognition tasks. Another study by Sands et al. (2015) explored the impact of noise on blind individuals' spatial awareness and mobility. They found that background noise reduced the participant's ability to hear approaching vehicles and impacted their ability to navigate their environment safely.

Despite the aforementioned results, there continues to be a dearth of research concerning the influence of noise on the academic success of individuals who are blind. Existing studies have primarily concentrated on the impact of noise on individuals with sight, making it difficult to apply their findings to blind students in a general sense. Further exploration is therefore necessary to explore how noise pollution specifically affects the educational attainment of blind individuals and to develop effective strategies for mitigating its adverse consequences.

An investigation of the effect of the school environment on the academic performance of secondary school pupils was conducted in Kuala Terengganu, Malaysia. The study used a descriptive survey research technique to collect data from 377 respondents using self-administered questionnaires. The results demonstrated that students from schools with adequate resources, knowledgeable teachers, and a supportive learning environment do better than students from schools with less resources. A secure, wholesome, and stimulating environment is necessary for children's development; this is especially true for kids in boarding schools and kids with disabilities.. A well-

equipped classroom and pleasant weather encouraged students to focus more on their studies and increase their level of comfort, which led to excellent results. Children spend the majority of their time in school, so a suitable and sufficient learning environment is essential. The study excluded qualitative viewpoints and was primarily quantitative with a limited sample size.

Research on the effects of peer pressure and the school environment on students' academic performance was also conducted (Korir & Kip Kemboi 2014).The study explored how peer influence and the school environment impact students psychologically. According to Bandura's social learning theory, learning is influenced by an individual's psychology, behavior, and surroundings. Results showed that peers and the school environment significantly influence students' academic performance. Schools, being educational institutions and a second home, play a crucial role in students' academic achievements. The head teacher and other educators, in their specific roles, can either positively or negatively affect students' academic success.

Despite the above study, the aspect of peer-to-peer relations is missing and student–community relations are also missing out.

2.2 Level of Inclusive education of visually impaired learners

A method of education known as inclusive education aims to accommodate all students, regardless of their individual peculiarities (UNESCO, 2019). It focuses on two main issues: social justice, which encourages peaceful cohabitation to lessen social exclusion, and equity, which provides education to all learners regardless of difference (Ainscow, 2020). Some academics characterize it as a means of enhancing all learners' access, engagement, and academic accomplishment (Manchester, 2012), while others maintain that it is an educational framework that facilitates access to high-quality instruction.

Of course! It is clear from the academic research that there are a number of gaps in the efforts to promote inclusive education. These gaps include insufficient training for teachers, a lack of resources, unfavorable attitudes, insufficient frameworks for laws and policies, and a lack of engagement from parents and students.. For instance, Saban and colleagues (2016) argue that teachers require additional training to effectively support learners with special needs. Similarly, Omitted-Ajayi and Ajayi (2017) suggest that the lack of resources and facilities hinders the implementation of inclusive education. Furthermore, negative attitudes towards individuals with disabilities can lead to exclusion, as highlighted by McManus and Ferguson's (2017) study. In addition, the study by Winzer and Mazurek (2017) found that a strong legal framework is fundamental to promoting inclusive education, while Pietarinen and colleagues' (2019) study emphasizes the importance of involving learners, parents, and relevant stakeholders. Addressing these gaps is crucial to enhancing inclusive practices and reducing social exclusion in the educational system.

For Azorin& Ainscow (2020) Inclusive education can be measured using the context of the school, resources available for all learners and teachers, and the processes of inclusion itself. This study will be guided by this conceptualization

Context

According to Azorin (2016), context refers to the elements of an inclusive school that either support or obstruct the application of inclusive education practices. These elements include the learning environment, the social and economic status of the students, the caliber of the students, the caliber of the community surrounding the

school, parents, and administrators. (Azorin (2016). To Azorin when this context is well managed, its suitability can promote inclusive education for all learners including those with visual impairment. While for other studies (Ainscow,2020; Forlin et al,2014; Loreman et al,2019), the context of inclusive education is particularly essential for learners with visual impairment because they depend heavily on the learning environment for them to maneuver and therefore every educational system to invest heavily in inclusive education context if it is to benefit learners with visual impairment. However, some studies also argue that context is most important for learners with mental retardation (Cox, 2019; Anderson & Boyle, 2015), Hearing impairment (Allen, 2018; Ackar, 2016; Ryan & Laad, 2020). The effectiveness of inclusive education for students with diverse needs, including those who are visually impaired, depends critically on context. While some research emphasize the importance of context for visually impaired students, other studies emphasize the importance of context for individuals with various impairments, including mental retardation and hearing impairment. To ensure equal access to quality education, it is essential for educational institutions to prioritize the development of an inclusive environment that caters to the diverse needs of all students.

The evidence mentioned above makes it abundantly evident that learners with vision impairments need to be included in inclusive educational settings. The majority of research, meanwhile, is Eurocentric, and little is known about how much the Ugandan school setting affects inclusive education for students with visual impairments. This research will close that spatial void.

Resources

Resources have been an area of concern in special needs and inclusive education recently (Ainscow, 2021). These resources are financial and human. Studies have shown that the success of inclusive education is based on the availability of both financial and human resources (UNESCO, 2017; Adyemo, 2020; Lodge, 2009). This is particularly true in the schooling of visually impaired learners who need assistive devices such as Spectacles, and Braille to aid their learning (Slee, 2019). It has been shown that these resources are lacking in most inclusive schools, which is even worsened by the few teachers in inclusive schools in northern Uganda. In most inclusive schools in Northern Uganda for instance Gulu High, they run an annex for the blind

with relatively few specialized teachers making it difficult to handle the increasing student population. This study attempted to assess the resources in these schools and how the school systems have been working with what they have.

Processes

According to Arzorin and Ainscow (2020), the process includes endeavors by the schools to ensure and guarantee, access, participation, and achievement of all learners in an inclusive school. To most inclusive education scholars (Slee, 2018; Ainscow, 2017; Cox, 2019; Forlin, 2017), the issue of access to education and curriculum; participation, and academic achievement of all learners is crucial for the success of inclusive education practices and this is even more relevant to learners with visual impairment because they are denied such access and participation by the school, parents, community and even teachers because of attitudes problems. Every successful education system must therefore emphasize access, participation, and achievement for all learners (UNESCO, 2020).

There is huge empirical evidence in the literature showing the relevance of access (Slee, 2018; Ainscow, 2020); Participation (Manchester, 2012; Forlin et al, 2014), and Achievement (Cox, 2020, Manchester, 2012; Loreman et al, 2018) for all learners especially those with visual impairment.

2.3 Relationship between School environment and Inclusive Education

Inclusive education aims to provide equal learning opportunities for all students, regardless of their background or abilities. Numerous academic papers and references highlight the importance of school environments in fostering inclusive education. Avramidis and Norwich (2002) contend that inclusive school cultures may significantly enhance inclusion, whereas Schratz and Ainscow (2003) stress that inclusive school cultures allow all students to participate fully in extracurricular and academic activities. Furthermore, studies show that universal design for learning (UDL) techniques and assistive technologies are essential for advancing inclusive education. Rieckmann and Grzegorczyk (2015) show that assistive technology in the classroom boosts participation for students with disabilities, and Lian et al. (2019) demonstrate that implementing UDL strategies enhances academic success and inclusive behavior. Ultimately, by encouraging an inclusive and positive school environment, all students can thrive academically, socially, and emotionally.

Research has shown that the school environment plays a crucial role in promoting inclusive education. Even then, Studies conducted by Kraemer et al. (2016) and Lipka and Komiak (2016) found that schools with positive attitudes towards diversity and a supportive learning environment fostered feelings of inclusion among students with disabilities and resulted in higher academic achievement and lower bullying rates. These findings emphasize the importance of creating a positive school climate through strong relationships between teachers, students, and parents.

According to several studies (e.g., Kauffman & Hallahan, 2005; Pijl & Meijer, 2011; Salend, 2015), the school environment is a critical factor that affects the success of inclusion programs. A conducive school environment fosters a positive and supportive culture, promotes diversity, provides accessible physical and technological infrastructure, and encourages collaborative practices among students, teachers, and support staff. A positive school environment can also reduce the stigma surrounding disability and increase awareness and acceptance of differences, leading to greater social inclusion of students with disabilities.

Furthermore, an examination of academic literature and references regarding the school environment and inclusive education demonstrates an increasing amount of research highlighting the significance of cultivating an inclusive atmosphere within educational institutions. This involves advocating for diversity, fairness, and societal equity, alongside empowering students to actively participate and contribute to their learning. In summary, the studies indicate that an affirming school environment plays a crucial role in enabling inclusive educational prospects for all students.

Recent scholarship has emphasized the crucial role of the school environment in promoting inclusive education practices (An, 2020; Hannah, 2019; Slee, 2018). Leading scholars, including Caroline Hannah, Roger Slee, and Yanqin An have underscored the necessity of creating inclusive school environments that prioritize equity and diversity. According to Slee (2018), transforming the practices and culture of schools is essential for successful inclusive education. Similarly, Hannah (2019) argues that schools should acknowledge and meet the varied needs of their student population. A (2020) emphasizes the impact of physical spaces on inclusion, noting that school design can either facilitate or impede it. Collectively, these scholars

underline the imperative for schools to proactively build environments that foster inclusion and equity. They emphasize that the creation of inclusive school environments is not only a moral obligation, but also a necessary step towards achieving academic success for all students. To foster inclusion and equity, schools must prioritize the removal of all physical, cultural, and social barriers that hinder access to education, while also providing individualized support plans for students with visual impairments or unique learning needs. Through these efforts, schools can build more supportive and empowering learning environments that enable all students to succeed.

According to Rosemarie Garland-Thomson, an English and bioethics professor at Emory University, a school environment that does not promote inclusivity can have significant negative effects on students with disabilities. Stereotypes and discrimination are perpetuated in these environments, making it challenging to challenge ingrained beliefs and resulting in a hostile and exclusive culture that harms students psychologically.

According to Harvard Graduate School of Education professor Thomas Hehir, unfavorable school settings limit children with disabilities' access to opportunities and services. Students with impairments may have reduced academic success, social isolation, and other negative effects as a result of their limited access to the general curriculum, extracurricular activities, and social networks that are crucial for adolescent development.

In conclusion, a positive and supportive school environment is essential for promoting inclusion and ensuring that students with disabilities have access to the resources and opportunities they need to succeed. Without such an environment, the negative impacts of stereotypes, discrimination, and exclusion can be devastating for these students.

Chapter Three

Methodology

3.0. Introduction

This chapter introduces the research methodology employed in the current study. As suggested by Cohen et al. (2018), a sound research methodology not only enhances the credibility of the study but also offers a systematic framework to achieve research objectives, address research questions, and test hypotheses. This encompasses aspects such as the research design, target population, sample size, sampling methods, data collection techniques, data processing procedures, and the validity and reliability of measurement tools. Additionally, the chapter discusses the approaches employed for data analysis.

3.1. Research Orientation

The study used a mixed method orientation rooted in pragmatism to clearly understand the phenomenon under investigation. The mixed method approach is a combination of both qualitative and quantitative research approaches anchored in pragmatism with a view that a situation cannot be clearly understood from one dimension (Chawla & Sondhi, 2020). Mixing the methods facilitates triangulation (Neuman, 2018)

3.2. Research Design

Hakim (2021) defines research design as a plan or strategy for conducting a research study coherently and logically to examine specific testable research questions of interest. The research design constitutes the blueprint for the collection, measurement, and analysis of data. For this study, the chosen research design was a descriptive research design, specifically the cross-sectional design as outlined by Creswell (2014). This design involved the collection of both quantitative and qualitative data from diverse participants or respondents simultaneously, providing a snapshot of information at a specific point in time (Creswell, 2014).Creswell et al., 2003; Teddlie & Tashakkori, 2009 noted that if the research is skewed towards the quantitative approach, the qualitative data collected is only used to support the quantitative data. By this research design, the analysis of two data sets was done separately.

3.3. Study Population

Because they possessed the necessary technical skills, all of the head teachers of the chosen secondary schools in the Bar-edge Layibi division of Gulu City participated in this study. Because they are the supervisors of these institutions, all learners in selected secondary schools in Bar-edge Layibi Gulu city, because they interact with the visually impaired all heads of department special needs in secondary schools in Bar-edge Layibi division Gulu City because of their expertise in special needs issues and visually impaired learners because they are the focused group. These groups are considered relevant in that they have the technical information for this study.

3.4. Sample Size Determination

The sample size was determined using the Morgan and Krejcie (1970) table of sample size selection (Chaokromthong & Sintao, 2021).

Sampling Frame

Category	Population	Sample Size	Sampling Procedure
Learners	712	248	Simple Random
Teachers	46	46	Purposive
Headteacher	2	2	Purposive
Department of Inclusive Education	4	4	Purposive
TOTAL	**764**	**300**	

Source: Primary Data.

3.5. Sampling Techniques

The study used a combination of simple random sampling and purposeful sampling. In using simple random sampling (Lottery method) regular learners, teachers, and members were given an equal probability of being selected to ensure that the views from the samples can be generalized to the larger population (Neuman, 2014) while learners with Visual Impairment were selected using Stratified random sampling (disproportionate stratified random sampling) according to their uniqueness, in that learners with Visual Impairment were categorized according to their disability type (Strata) and then random sampling was administered to select the required number from

the stratum. Out of the all class, learners were given numbers 1-3 then all the learners with number 2 were picked. The advantage of stratified random sampling is that it gives all members of particular strata an equal chance to be selected in the study (Bougie & Sekeran, 2020) for purposive sampling only, Headteachers of schools were selected purposively because of their roles in management and inclusive education, (Chawla & Sondhi, 2018).

3.6. Data Collection Methods/ Instrument

According to Jotform (2021), the Data collection method refers to ways in which facts, figures, objects, symbols, and events are gathered from different sources. In this study, both Primary and secondary data were collected. Overall, four methods namely; individual in-depth interviews, self-administered questionnaires, Focused Group Discussions, and document analysis were used to gather the information required for this research.

3.6.1 Questionnaire Survey/ Questionnaires

A questionnaire is a research instrument consisting of a series of questions or prompts aimed at obtaining information from a participant. While it may occasionally be employed to collect qualitative data, its primary purpose is to gather quantitative data

In a typical research questionnaire, a combination of open-ended and closed-ended questions is usually included. Open-ended questions, which are more extensive and allow for more detailed responses, are used in situations where the researcher is unable to predict or pre-determine the answers given by the respondents. Conversely, closed-ended questions are employed when responses can be categorized into pre-defined options or choices.

The primary method of data collection for all categories in the study was both open-ended and closed-ended questionnaires. This was done to analyze specific technical difficulties that the observation, document reviews, and interviews would not have been able to offer, as well as to fill in any gaps in the material. The five-point Likert scale was used to grade the closed-ended questionnaires ranging from strongly agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) SA (4), Agree (3) Disagree (2) Strongly Disagree (1)

3.6.2 Interview/ Interview Guide

Key informants in this research were interviewed. In this instance, interviews with head teachers, classroom instructors, visually impaired students, and regular students were conducted. Data collection sometimes involved verbal conversations with respondents in person. After attempting to schedule a meeting with the responses, an interview schedule was created. The interviews helped to extract pertinent qualitative data for this investigation. The interviews aided in question clarification and the exploration of topics about inclusion and the educational environment.

3.6.3 School Observation/ Observation Checklist

This method involves the collection of data by observing pre-defined behavior (Bougie & Sekaran, 2020). In structured observation, a predetermined timetable and particular variables are used to collect data. (Cohen, Manion & Morrison, 2018). In this case, the researcher determines before the observation the behaviors to observe. Unstructured observation is carried out in a free-form way without the use of preset variables. (Merriam & Tisdell, 2016). In this study, structured observation was used where the observation checklist was used and included questions like, the school buildings (Dormitory, Class, Toilets, Offices. Staff room) are ramped, whether there are special toilets for learners with physical disabilities, Blind learners school environment and inclusive education.

3.7. Quality Control

The instruments were piloted to determine their validity and reliability. Data collection instruments were pre-tested to randomly select respondents before it was used in the field. The questions in the interviews were discussed at the peer review level. Quality control involved adjusting/modification of each item upon coming back from a pre-field study to improve the validity and reliability coefficient.

Validity

The validity of a data collection instrument refers to its ability to accurately measure the intended constructs or variables, as stated by Amin (2005) and Kahn (1986). In other words, it assesses the extent to which the tool effectively captures what it claims to measure. To arrive at good conclusions for any study, the data used should be true

and accurate; it is on this basis that researchers endeavor to construct data collection tools that accurately measure what they should be measuring. Validity also refers to the truthfulness of research findings (Amin, 2006). To ensure the validity of the research instruments, the standardized questionnaires and interview guides were pre-tested in one inclusive school in Gulu City. Using the SPSS software content validity index was calculated. It can also be substituted manually as

Content validity index= Number of items rated relevant by all judges

Total Number of Items in the Questionnaire

Studies have shown that if the CVI of an instrument is = 0.70 or above then the instrument is considered to be valid and therefore acceptable (Cresswell, 2014)

Reliability

Reliability refers to the extent to which a data collection instrument consistently measures a given concept (Neuman, 2014). An instrument with high reliability will produce the same results whenever it measures a specific concept (Cohen et al, 2018). Reliability is often represented numerically by a reliability coefficient. A high-reliability coefficient indicates that, if the study was to be repeated, the results would always be the same. This could be the consequence of respondents understanding the question items in the data-collecting tool in the same way, leading to consistent responses in a given situation. The pre-test survey was conducted and the results were positive with the content validity index showing 0.7 signifying that the tools used were reliable All the variables used in this study demonstrated a significant relationship with the sum of all the variables indicating that the tools used in the research have good validity and indeed measure the intended constructs and are suitable for evaluating the research objectives as analyzed in the tables

Table 4. 1: Reliability statistics

	Physical LE	**Social LE**	**Inclusive Education**
Number of items	14	13	73
Cronbach's alpha	0.827	0.806	0.961

The reliability statistics also indicated that all constructs had high Cronbach's alpha coefficients exceeding the commonly recommended threshold of 0.7, implying that the items within each construct were strongly correlated with each other and consistently measured the intended constructs. This implies that the data obtained from these variables are reliable and can be trusted for further analysis and interpretation.

3.8. Ethical Consideration

Before their involvement in the study, each participant's agreement was obtained in compliance with the research code of conduct. Before the interviews, the respondents were shown and given an explanation of the study's objectives as well as the intended use of the data they provided on a consent form. To maintain confidentiality, the participants' identities were kept private. Statements made on the questionnaires and in the individual interviews did not cause stigmatization of any of the participants.

3.9. Administration Procedure

After establishing the suitability of the instruments, the researcher developed a program of activities and then obtained a letter of introduction from the Gulu University Faculty of Education and Humanities explaining the purpose of the study and solicited the cooperation of the selected respondent’s permission from the City Education Department.

3.10. Data Analysis

The quantitative data was analyzed using the Statistical Package for Social Science (SPSS version 27.0) and quantitative output was realized. Descriptive statistics output was presented in frequencies and percent to illustrate any central tendencies and dispersions (Kaur, et al (2018). Inferential statistics was used to analyze research questions and inferential statistics output was obtained at univariate level, bivariate level, and multivariate levels. At the univariate level item analysis was done using descriptive statistics, while at the bivariate level, ANOVA was used to analyze differences between two variables, and at the Multivariate level, Pearson product-moment correlation coefficient and Multiple regression analysis were used to produce inferential statistics output.

For qualitative data, the researcher used thematic analysis that was meant to identify, analyze, and report the patterns of an interview, and focused group discussions and to identify the main themes that emerge from the responses given by the respondents (Bryman, 2016). Upon completion, the researcher proceeded with the interpretation of the data.

Chapter Four

Data Presentation, Analysis, and Interpretation

4.0 Introduction

In this chapter, the data presentation, analysis, and interpretation of the study findings are presented. The research questions addressed the status of the school environment in inclusive secondary schools for learners with visual impairment, the level of inclusive education provided to visually impaired learners in secondary schools, and the impact of the school environment on the level of inclusive education for visually impaired students.

4.1 Rate of response.

The desired quantity of participants for this research was established as 300 individuals. A total of 283 participants were successfully interviewed, resulting in a deficit of 17 individuals who did not participate. The response rate achieved in this study is 94.33%, indicating a high level of participation and engagement from the target sample.

4.3 Bio-data of participants

Bio-data was collected from respondents in the study and results are presented below.

Table 4. 2: Bio-data of participants

Variable		Frequency	Percentage
Category	Student	246	86.9%
	Teacher	37	13.1%
Gender	Male	134	47.3%
	Female	149	52.7%
Age Categories	<18 Years	191	67.5%
	18-35 Years	56	19.8%
	36+ Years	36	12.7%
Education	Ordinary Level	168	59.4%
	Advanced Level	78	27.6%
	Diploma	15	5.3%
	Degree	22	7.8%
School	SA(GHS)	197	69.6%

	SB(GAS)	86	30.4%
Class	Senior One	26	10.6%
	Senior two	48	19.5%
	Senior Three	25	10.2%
	Senior Four	69	28.0%
	Senior Five	40	16.3%
	Senior Six	38	15.4%

Source: Field data, 2023

From the above table, the participants were categorized into two groups: students and teachers. Out of the total respondents, the majority, comprising 86.9%, were students, while 13.1% were teachers. This distribution indicates that the study predominantly focused on capturing the perspectives and experiences of students.

The gender distribution among the participants shows a nearly equal representation, with 47.3% male and 52.7% female respondents. This gender balance ensures a diverse and inclusive representation in the study, allowing for a comprehensive understanding of the research topic.

The participants' age distribution reveals that the majority, accounting for 67.5%, were under 18 years old. A smaller proportion, 19.8%, fell within the age range of 18 to 35 years, while 12.7% were aged 36 years or older. This age distribution indicates that the study primarily involved younger individuals, likely reflecting the student population's composition.

The majority of participants, representing 59.4%, were in their Ordinary Level education. A significant proportion, 27.6%, were in Advanced Level education, while a smaller percentage, 5.3%, held a Diploma. Additionally, 7.8% of the participants had obtained a degree qualification. This distribution signifies a diverse educational background among the respondents, contributing to a multifaceted understanding of the research topic.

The participants were drawn from two main schools: Gulu High School and Gulu Army Secondary School. The majority, accounting for 69.6%, were from Gulu High School, while the remaining 30.4% were from Gulu Army SS. This distribution indicates that Gulu High School had a higher representation in the study, potentially reflecting its larger disabled student population.

The largest percentage of the students who participated in the study, 28.0% were in Senior Four, followed by 19.5% in Senior Two and 16.3% in Senior Five. The remaining respondents were distributed across Senior One (10.6%), Senior Three (10.2%), and Senior Six (15.4%). This distribution reflects a diverse sample across all class levels, ensuring a comprehensive representation of the student body.

4.4 Univariate analysis of the status of the school environment for inclusive secondary schools in Gulu City.

In this section, the descriptive statistics are provided to illustrate the current condition of the school environment in Gulu City. The analysis is divided into two categories: the physical school learning environment and the social school learning environment.

4.4.1 Physical Learning Environment

Results for data collected on Physical Learning are presented below.

Table 4. 3: The status of the physical learning environment according to Secondary Schools.

Physical learning environment	SD+D (%)	SD (%)	D (%)	NS (%)	A (%)	SA (%)	SA+ A (%)
An area or space that is safe for all learners exists	13.4	7.8	5.7	4.2	31.4	50.9	82.3
The physical set up of the school priotises the safety and overall welfare of all students including those with special needs	5.3	2.1	3.2	2.1	54.8	37.8	92.6
Safe drinking water is available for all learners and school staff	6.0	2.8	3.2	1.8	42.0	50.2	92.2
Adequate sanitation facilities are available for all learners	6.4	2.1	4.2	3.5	45.9	44.2	90.1
The play area is safe for all learners	3.2	1.8	1.4	2.5	50.5	43.8	94.3
Schools and other learning environments are located nearby	6.0	2.1	3.9	3.9	51.6	38.5	90.1
Learners participate in health – promotion programs as part of the co-curricular programs	7.1	3.2	3.9	2.5	51.9	38.5	90.5
The school buildings (Dormitory, Class, Toilets, Offices. Staff room) are ramped	9.5	4.2	5.3	3.9	54.4	32.2	86.6
There are special toilets for learners with disabilities	13.4	8.1	5.3	4.2	51.6	30.7	82.3
The school has braille for all the blind and visually impaired	9.9	6.0	3.9	4.2	53.0	32.9	85.9
The classrooms are well-ventilated and spacious enough for all learners	5.3	2.8	2.5	3.2	39.2	52.3	91.5

There are walkways in school for visually impaired learners	9.5	4.6	4.9	3.2	50.9	36.4	87.3
The dormitories are well-ventilated, light and spacious, and furnished with appropriate beds	10.2	5.3	4.9	2.1	46.6	41.0	87.6
Play material is available for all learners including learners SEND	6.0	3.5	2.5	3.2	48.8	42.0	90.8
Average	7.9	4.0	3.9	3.2	48.0	40.8	88.9

Source: Author's field data, 2023.

The analysis of the physical learning environment (PLE) revealed that learners perceived that the Physical Learning Environment was relatively safe, inclusive, and conducive to the needs of all learners in Bar-edge-Layibi Division, Gulu City. This supposition was arrived at mainly because the majority of the participants generally agreed with the positive statements which indicated their acknowledgment of particular practices in their school environment as discussed below.

The results indicated that 82.3% of participants generally agreed that there are areas or spaces within their schools that are safe for all learners, highlighting a commitment to ensuring a secure learning environment.

Additionally, the results also indicated that 92.6% of schools have a physical environment that is protective of all learners including those with special needs, indicating inclusivity and efforts to accommodate students with diverse needs in schools.

Moreover, schools have placed significant importance on providing essential facilities. For example, a considerable 92.2% of respondents indicated their agreement with the availability of safe drinking water for all students and staff in their school. Additionally, 90.1% acknowledged the presence of sufficient sanitation facilities for everyone within the school. These results illustrate the dedication of educational institutions to ensuring the wellbeing and health of both students and staff members by supplying necessary resources.

The findings also revealed that a majority of respondents, approximately 94.3%, expressed overall agreement that their school provided secure play areas that were accessible to all learners. This inclusive approach to play spaces demonstrates the

commitment of schools to create an environment where students, including those with special needs, can engage in physical and social activities on an equal level. Additionally, the data showed that 90.1% of participants agreed that their school and other educational facilities were conveniently situated nearby. This suggests that students in the area have convenient access to various learning opportunities..

In terms of the integration of health-promotion programs within the curriculum, the results indicated that up to 90.5% of respondents agreed that learners participate in health-promotion programs as part of the co-curricular activities, suggesting a comprehensive approach to education that promotes students' overall well-being.

Accessibility features were evident in the physical infrastructure since 86.6% generally agreed that their school buildings are ramped, indicating efforts to ensure accessibility for students with mobility challenges. Furthermore, 82.3% of respondents recognized that their schools had specialized facilities for learners with disabilities.

The study also revealed that support for visually impaired learners was available with 85.9% agreeing to the provision of braille materials and 87.3% to the availability of walkways demonstrating efforts to create an inclusive environment that enables the participation and navigation of visually impaired learners within the school premises.

The study also found that the physical conditions of the classrooms were favorable with 91.5% agreeing that their classrooms are well-ventilated and spacious enough for all learners. This indicates the school's efforts to provide a conducive learning environment that promotes students' comfort and concentration.

Furthermore, 87.6% generally agreed that their dormitories are well-ventilated, light, spacious, and furnished with appropriate beds. This finding indicates the school's commitment to providing well-maintained and appropriately furnished dormitories.

To summarize, the research findings indicate that schools in Bar-edge-Layibi division, Gulu City, have made a concerted and extensive endeavor to establish a secure, inclusive, and supportive physical learning atmosphere that caters to the requirements of every student.The findings show that most schools provided essential amenities, promoting accessibility, and accommodating students with diverse needs. These

positive perceptions of the physical learning environment lay the foundation for inclusive education practices and contribute to the overall well-being and educational experiences of learners in the region as shown in Table 4.3.

4.4.2 Social Learning Environment

The results of the analysis of the Social Learning Environment are presented below

Table 4. 4: The status of Social Learning environment in Secondary Schools

Social Learning environment	SD+D (%)	SD (%)	D (%)	NS (%)	A (%)	SA (%)	SA+A (%)
Teachers are trained on child rights and protection	4.2	3.2	1.1	2.1	41.0	52.7	93.6
The school encourages the expression of child rights and learners are knowledgeable about their rights	3.9	1.8	2.1	1.4	41.7	53.0	94.7
Learners participate actively in the decision-making activities in their schools	3.2	1.8	1.4	3.5	42.0	51.2	93.3
The school has a well-constituted and active prefectural body which is respected by the staff	3.5	2.5	1.1	2.8	44.5	49.1	93.6
Education is facilitated through the utilization of appropriate visual aids and various instructional resources.	6.0	3.9	2.1	3.2	48.4	42.4	90.8
Teachers ask individual questions and interact with the learners freely	5.7	3.9	1.8	2.1	40.3	51.9	92.2
Teachers use the home language of the majority of learners to explain key concepts and support learning	7.4	3.5	3.9	3.5	46.3	42.8	89.0
Teachers adapt lessons to the needs and abilities of learners in their classes	5.3	3.2	2.1	2.8	51.9	39.9	91.9
Teachers are friendly in their interaction with other learners	3.5	1.8	1.8	0.7	43.8	51.9	95.8
Learners interact freely with each other in school, classes, and dormitory	4.2	1.8	2.5	1.1	39.2	55.5	94.7
There is a clear mechanism of communication in school between teachers, administration, and learners	3.9	2.1	1.8	2.5	49.8	43.8	93.6
There is a talking compound handling the social issue	5.7	1.4	4.3	2.1	42.9	49.3	92.2
There are good interpersonal relations between all learners	4.9	3.5	1.4	4.9	47.0	43.1	90.1
Average	4.7	2.6	2.1	2.5	44.5	48.2	92.7

Source: Author's field data, 2023.

The analysis of the social learning environment variables provides valuable insights into the perceptions of respondents regarding the inclusivity and supportive atmosphere within their schools. The results reveal that a majority of respondents expressed positive

views across various dimensions, with high percentages indicating agreement or strong agreement.

Teachers play a crucial role in creating an inclusive environment, and the results show that 93.6% generally agreed that their teachers have received training on child rights and protection. This indicates a commitment to equipping teachers with the necessary knowledge and skills to ensure the well-being and rights of learners.

Moreover, a majority of the participants (94.7%) acknowledged that their schools actively promote the recognition and understanding of child rights, indicating the presence of a nurturing environment that enables students to confidently assert their rights and cultivate a sense of empowerment.

In terms of learner participation, the findings indicate that 93.3% generally agreed that learners actively participate in decision-making activities in their schools. This highlights a participatory approach that values the voices and contributions of learners. Additionally, a similar trend is observed regarding the prefectural body within schools with 93.6% agreeing that their school has a well-constituted and active prefectural body that is respected by the staff. This signifies a structure that promotes discipline, responsibility, and mutual respect among students and staff.

Furthermore, the use of appropriate visual aids and instructional resources is perceived by 90.8% of participants to significantly augment learning experiences. This indicates the school's commitment to meeting the specific requirements of visually impaired students and fostering an inclusive educational setting.

Furthermore, teachers' active interaction with learners is evident with 92.2% agreeing that their teachers ask individual questions and interact freely with learners. This reflects a positive teacher-student interaction that promotes active engagement and personalized learning.

Additionally, 89.0% of participants agreed that their teachers use the home language of the majority of learners to explain key concepts and support learning. This suggests an inclusive approach that recognizes and values students' linguistic backgrounds.

The results also indicate that teachers adapt lessons to the needs and abilities of learners in their classes, with 91.9% generally agreeing. This highlights a learner-centered approach that recognizes diverse learning needs and promotes inclusivity.

The study also revealed that positive teacher-student interactions extended beyond the classroom, as reported by 95.8% of respondents who generally agreed that teachers are friendly in their interaction with other learners. This indicates a positive and supportive teacher-student relationship that contributes to a conducive learning environment. Similarly, learners themselves also experienced positive social interactions, with 94.7% agreeing that learners interact freely with each other in school, classes, and the dormitory as well as 90.1% agreeing that there is good interpersonal relationship between all learners. This suggests a positive social atmosphere that encourages collaboration, communication, and friendship among students.

Additionally, 93.6% of respondents agreed that there is a clear mechanism of communication in school between teachers, administration, and learners. This highlights the importance of transparent information sharing and collaboration among stakeholders.

Likewise, 92.2% agreed that there is a talking compound in their school that addresses social issues. This indicates a platform for open dialogue and support regarding social challenges faced by learners.

Overall, the interpretations of the social learning environment variables collectively show that there is a generally positive and inclusive social educational setting in terms of good teacher-pupil relations, pupil-pupil relations, talking compound, learner participation in Bar-dege-Layibi Division, Gulu City reflecting the efforts made by schools to create an inclusive and supportive learning environment for learners with visual impairments as shown in Table 4.4.

4.5 Tests for the status of school learning environment for inclusive education.

Table 4. 5: Group statistics of the status of the school learning environment

Variables	School	N	Mean	SD
Physical LE	SA(GHS)	197	4.2074	.49878
	SB(GAS)	86	4.1071	.59578
Social LE	SA(GHS)	197	4.3375	.44597
	SB(GAS)	86	4.3318	.50106
Learning Environment	SA(GHS)	197	4.2724	.43187
	SB(GAS)	86	4.2195	.50351

Source: Field data, 2023

Table 4. 6: Independent samples test of status of school environment

		Levene's tests of equality of Variance		Test for equality of means		
		F	Sig.	t	Df	Sig.
Physical LE	Equal variances assumed	2.165	.142	1.464	281	.144
	Equal variances not assumed			1.366	139.32	.174
Social LE	Equal variances assumed	1.185	.277	.094	281	.925
	Equal variances not assumed			.090	146.37	.929
Learning Environment	Equal variances assumed	.775	.379	.901	281	.368
	Equal variances not assumed			.848	142.01	.398

Source: Field data, 2023

For the Physical Learning Environment, Levene's test indicates that the assumption of equal variances is met ($p > 0.05$), both with equal variances assumed ($F = 2.165$, $p = 0.142$) and not assumed ($F = 1.366$, $p = 0.174$). The t-test results show that there is no significant difference in the status of the physical learning environment between SA(GHS) and SB(GAS) ($t = 1.464$, $p > 0.05$) implying that both schools have made visible efforts to ensure students with special needs are accommodated in the school environment as shown in table 4.6.

For the Social Learning Environment, Levene's test suggests equal variances ($p > 0.05$) for both assumptions (equal variances assumed and not assumed). The t-test results reveal no significant difference in the status of the social learning environment between the two schools ($t = 0.094$, $p > 0.05$) implying that the social learning environment in SA(GHS) and SB(GAS) are relatively the same as shown in table 4.6.

For the overall Learning Environment, Levene's test shows equal variances ($p > 0.05$) for both assumptions. The t-test results indicate that there is no significant difference in the status of the overall learning environment between SA(GHS) and SB(GAS) ($t = 0.901$, $p > 0.05$) implying that both schools have similar status in terms of the school learning environment as shown in table 4.6.

This result /finding is in line with results from a key informant interview with the head teacher of school B

“School environment is critical for successful Inclusion for all learners. It is even more critical for learners with visual impairment because they don’t see or partially see they need a tailored learning environment so that they are included in school” H/T SB 2023.

In a similar view, the head of the department of School A noted that

“The physical learning environment is necessary for Inclusive education. These learners are very sensitive to the physical environment so any adjustment in the physical environment affects them” HOD SA 2023.

Similarly in our interview with Visually Impaired learners, a learner noted

“Our stay in this school is determined by the school environment. We need walkways to be able to freely move in school because sometimes we are new in school and we don’t have attendants. If walkways are there we can move freely within the school and interact with others well” Learner in School 2023.

4.6 Level of inclusive education for visually impaired learners.

This section presents quantitative information regarding the level of inclusive education in Gulu City schools. It examines multiple aspects, including the general environment,

the resources accessible, and the implementation procedures specifically tailored to visually impaired students.

4.6.1 Context

Table 4. 7: Status of Inclusive Education in terms of Context to Secondary

Context inclusion	SD+D	SD	D	NS	A	SA	SA+A
Having a thorough understanding of the socioeconomic circumstances of students	6.0	2.1	3.9	4.6	52.7	36.7	89.4
Having the necessary tools and expertise to provide help and assistance to students who are more prone to being marginalized or facing difficulties.	2.5	1.1	1.4	4.2	41.3	51.9	93.3
Students come from different cultures	2.8	2.5	0.4	2.5	37.8	56.9	94.7
The existing laws adequately address the requirements of the students.	5.3	2.8	2.5	3.5	49.5	41.7	91.2
The leadership team distributes tasks equally	6.7	3.9	2.8	3.5	52.3	37.5	89.8
The leadership team takes into account the viewpoints of others when making decisions.	4.6	2.1	2.5	3.5	49.1	42.8	91.9
The leadership team plays an instrumental role in endorsing the advancement of inclusive practices, identifies with values linked to the principle of inclusion	4.2	2.8	1.4	2.5	49.8	43.5	93.3
	5.3	3.2	2.1	1.1	49.8	43.8	93.6
Practices foster inclusive values among my students	3.9	2.5	1.4	2.5	49.1	44.5	93.6
Preventing discrimination is part of my teaching work	3.5	1.4	2.1	2.1	40.6	53.7	94.3
Teachers and students have a mutual respect	4.2	1.8	2.5	2.1	43.5	50.2	93.6
There is a good coexistence environment in the school	4.9	2.1	2.8	2.8	42.8	49.5	92.2
Collaborate with colleagues	3.9	1.8	2.1	3.2	44.5	48.4	92.9
Distribute educational resources to fellow educators.	8.1	4.9	3.2	2.1	41.0	48.8	89.8
Perform co-teaching activities	4.9	2.8	2.1	2.8	47.0	45.2	92.2
Sustain continuous communication with the families.	4.9	2.1	2.8	3.2	47.7	44.2	91.9
Encourage families to get involved in children's education	2.8	2.1	0.7	3.2	43.5	50.5	94.0
Families participate actively in the school life	6.0	2.1	3.9	2.8	41.7	49.5	91.2
Some volunteers collaborate in the education process (old students, retired people, families, and others)	5.3	2.8	2.5	3.5	45.9	45.2	91.2
During the school year, I carry out activities with associations that cooperate with the school	5.7	2.1	3.5	5.3	44.5	44.5	89.0
The local authorities are receptive to requests for involvement in campaigns or providing services within the school setting.	4.9	3.9	1.1	3.9	51.9	39.2	91.2
The school actively participates in networking initiatives with another educational institution, both at a regional, national, or international level.	7.1	2.5	4.6	4.2	39.2	49.5	88.7
School collaborates with other socio-educational institutions	7.1	3.5	3.5	3.9	40.8	48.2	89.0
Average	5.0	2.6	2.4	3.2	45.5	46.3	91.8

Source: Field data, 2023.

In order to gauge the school's dedication to fostering an inclusive learning environment, various factors were examined. Firstly, the survey recorded a strong level of consciousness (89.4%) among respondents regarding the socioeconomic backgrounds of students. Moreover, a significant majority of participants (93.3%) affirmed that teachers possess the essential knowledge to guide and support vulnerable students or those at a higher risk of exclusion.

Moreover, the survey findings indicated that the school boasts a student population hailing from diverse cultural backgrounds (94.7%). This multiculturalism enriches the educational journey and fosters intercultural comprehension. Furthermore, respondents acknowledged that the existing legislation adequately addresses the students' needs (91.2%), guaranteeing that the school operates within a legal framework that promotes inclusivity.

Moving on to leadership, it was found that the leadership team distributes tasks equally (89.8%), fostering a sense of fairness and collaboration among staff members. Likewise, the leadership team considers the opinions of others when making decisions (91.9%), thereby promoting a participatory approach to leadership.

Furthermore, the survey revealed that the school's leadership team actively encourages the implementation of inclusive practices (93.3%). This showcases their dedication to establishing a learning environment where every student is esteemed and assisted. Similarly, respondents expressed a strong connection to values associated with the principle of inclusion (93.6%), highlighting the significance of nurturing a culture that embraces inclusivity.

In addition to the leadership's efforts, the practices implemented by teachers also play a crucial role. Respondents highlighted that their practices foster inclusive values among students (93.6%). Teachers actively work to prevent discrimination and ensure a safe and inclusive classroom environment (94.3%). Furthermore, teachers and students have mutual respect (93.6%), contributing to a positive and inclusive learning atmosphere.

Likewise, a good coexistence environment was reported in the schools (92.2%), indicating that students feel safe and supported in their interactions with peers. Additionally, teachers collaborate with colleagues (92.9%), sharing ideas and best practices to enhance inclusive education. They also actively engage families in the education process (94.0%), recognizing the importance of parental involvement in supporting students' learning.

Furthermore, volunteers and associations collaborate with the school, enriching the education process (91.2%). The school actively participates in networking projects with other schools (88.7%), fostering cooperation and exchange of inclusive practices. Moreover, the school collaborates with socio-educational institutions (89.0%), recognizing the value of partnerships in promoting inclusive education.

In conclusion, the survey results indicate a strong commitment to inclusive education within the schools. The leadership's inclusive practices, for instance having visually impaired learners in students’ leadership, teachers' dedication to fostering inclusive values like cooperation, mixing up freely in class and collaboration with various stakeholders all contribute to creating an inclusive learning environment where students feel valued, respected, and supported in their educational journey as shown in Table 4.7.

4.6.2 Resource inclusion

Table 4. 8: The status of Inclusive Education in terms of resources

Resource inclusion	SD+D (%)	SD (%)	D (%)	NS (%)	A (%)	SA (%)	SA+A (%)
Takes part in ongoing training in responses to diversity	5.7	2.8	2.8	2.5	51.9	39.9	91.9
Work together on innovative teaching projects aimed at enhancing inclusion.	4.9	2.5	2.5	3.5	48.1	43.5	91.5
Staff at the school includes enough specialists/auxiliary workers to attend to its student diversity	4.6	3.2	1.4	2.8	48.8	43.8	92.6
Have external advice whenever needed (Educational Guidance and Psycho pedagogical Services)	6.7	3.2	3.5	2.8	45.9	44.5	90.5
Implement peer tutoring to facilitate student mutual assistance.	4.6	1.4	3.2	4.6	46.6	44.2	90.8
The school recognizes the invaluable contribution of families as a valuable human asset.	4.9	2.1	2.8	2.1	41.3	51.6	92.9
Enjoy a wide range of teaching resources that respond to all students' characteristics	4.9	2.8	2.1	3.5	45.9	45.6	91.5
Regularly take stock of the materials to take maximum advantage of the school's resources	8.1	4.9	3.2	3.2	48.4	40.3	88.7
All the classrooms are technologically equipped (beamer, projector, computer, smart board)	11.3	5.3	6.0	1.8	53.7	33.2	86.9
Computer rooms are equipped with enough computers	11.7	3.2	8.5	2.1	42.0	44.2	86.2
Students have access to curriculum information	9.9	2.8	7.1	5.3	46.3	38.5	84.8
The school's facilities are designed to ensure easy access for all individuals	5.3	2.5	2.8	4.9	51.2	38.5	89.8
The school's equipment and furniture are customized to cater to the specific requirements of students.	6.0	2.8	3.2	3.5	41.7	48.8	90.5
The school offers out-of-school activities (theatre, cinema, choir, dancing, radio, press)	7.4	4.9	2.5	3.9	43.8	44.9	88.7
The school offers out-of-school sports activities	7.1	3.5	3.5	3.5	41.3	48.1	89.4
The school allows its facilities to be used for other activities during holiday	9.9	5.7	4.2	3.9	47.0	39.2	86.2
The school organizes bench marking activities for families (Workshops, Schools for Parents)	12.7	6.7	6.0	3.2	43.1	41.0	84.1
The school provides a repository of resources for students who require additional support. (e.g. loans of textbooks)	7.4	3.5	3.9	3.9	44.9	43.8	88.7
The school manages the community/district resources effectively	4.9	2.8	2.1	1.8	47.0	46.3	93.3
Average	7.3	3.5	3.8	3.3	46.3	43.2	89.4

Source: Author's field data, 2023.

The study found that schools actively participate in ongoing training programs focused on responses to diversity (91.9%). This demonstrates a commitment to continuously improving inclusive practices through professional development. Additionally, the school collaborates in teaching innovation projects aimed at enhancing inclusion (91.5%), indicating a proactive approach to fostering inclusive learning environments.

The survey findings also assessed the presence of staff members with diverse expertise and support staff to address student diversity. The results indicated that the schools have an adequate number of specialists and support staff to cater to the diverse needs of students (92.6%), guaranteeing that students receive the necessary assistance and accommodations when required. Furthermore, the school actively seeks external guidance from educational counseling and psycho-educational services as needed (90.5%), enhancing its inclusivity in terms of resources.

Regarding student support, the utilization of peer tutoring was acknowledged as an approach to encourage inclusive learning environments (90.8%). Peer tutoring enables students to assist and uplift one another, cultivating a collaborative and inclusive ambiance. Additionally, the school recognizes the importance of families as a valuable resource (92.9%), emphasizing the need to engage families in supporting their children's education.

In terms of instructional materials, it was found that schools have access to a diverse array of resources that cater to the individual needs of all students (91.5%).This implies that schools provide diverse materials and tools to cater to different learning styles and needs. Moreover, the school regularly takes stock of the materials to maximize the use of resources (88.7%), ensuring their effective utilization.

The availability and accessibility of technology and equipment were also assessed. The results indicated that all classrooms are technologically equipped with devices like projectors, computers, and smart boards (86.9%). Additionally, computer rooms were reported to have enough computers for student use (86.2%). These technological resources contribute to creating an inclusive learning environment.

Furthermore, students' access to curriculum information (84.8%) and the school's commitment to maintaining accessible installations (89.8%) were highlighted. It was observed that the school's equipment and furniture are tailored to meet the requirements of students (90.5%), guaranteeing a welcoming and inclusive atmosphere for learning.The provision of out-of-school activities, both cultural and sports-related, was also mentioned (88.7%), enhancing students' overall learning experiences.

Moreover, the study indicated that schools allow the utilization of their facilities for various purposes during vacation periods (86.2%), thereby maximizing resource utilization and offering advantages to the local community. Additionally, the organization of extracurricular events for families, such as workshops and parent schools, was identified (84.1%), which serves as an additional incentive for family engagement within the school community.

Lastly, the school demonstrates efficient management of community and district resources (93.3%), effectively utilizing the available resources to facilitate inclusive practices.

To summarize, the research findings indicate that schools prioritize inclusivity by implementing diverse strategies. These include providing training opportunities for staff, engaging in collaborative and innovative initiatives, maintaining an adequate number of support staff, seeking external guidance when required, and promoting peer tutoring. By efficiently managing resources and actively involving families and the community, the school cultivates a supportive and inclusive learning environment for every student, as depicted in Table 4.8.

4.6.3 Process inclusive education

This section presents the descriptive statistics highlighting inclusion in terms of the process of education in schools measured across parameters such as access to school curriculum, presence of school & and classes, and Participation of all learners in learning.

4.6.3.1 Access to school and curriculum

Table 4. 9: The level of access to school and curriculum

Access to school and curriculum	SD+D (%)	SD (%)	D (%)	NS (%)	A (%)	SA (%)	SA+A (%)
School is accessible to all learners	4.3	2.1	2.1	2.5	44.3	48.9	93.3
The school is near the community	1.4	1.1	0.4	1.8	45.0	51.8	96.8
The school welcomes all learners	5.3	2.8	2.5	2.1	38.5	54.1	92.6
School reaches out to the community to encourage them to send children to school	4.6	1.4	3.2	2.5	42.6	50.4	92.9
Average	3.9	1.9	2.1	2.2	42.6	51.3	93.9

Source: Author's field data, 2023.

The results indicated that the schools are accessible to all learners (93.3%) suggesting that the school provides an environment that accommodates the diverse needs of students, ensuring that physical barriers do not hinder their access to education.

Moreover, it was assessed whether the school is near the community. The findings revealed that the schools are near the community (96.8%), indicating that it is conveniently located, making it easier for students to commute and fostering a strong connection between the school and the local community. Additionally, the results showed that the schools are welcoming to all learners (92.6%), suggesting that the schools foster an inclusive culture where students feel accepted and valued.

Moreover, the study assessed the school's initiatives in reaching out to the community to encourage parental enrollment of children. The findings revealed that the school actively fosters community engagement in advocating for education (92.9%). This underscores the school's dedicated endeavor to ensure equitable access to education by actively involving and motivating the community to enroll their children in school.

In summary, schools demonstrated a strong commitment to inclusive access to education. It provides an accessible environment for all learners, is located near the community, creates a welcoming atmosphere, and actively engages with the

community to promote education. These efforts contribute to ensuring that all students have equal opportunities to access and benefit from the school's curriculum as shown in Table 4.9.

4.6.3.2 Presence in school and classes

Table 4. 10: The presence of learners in school and classes

Presence in school and classes	SD+D (%)	SD (%)	D (%)	NS (%)	A (%)	SA (%)	SA+A (%)
Students regularly attend school and classes	3.5	1.8	1.8	3.5	47.3	45.6	92.9
The presence of diverse students enhances the educational experience.	3.2	2.1	1.1	3.2	53.0	40.6	93.6
Plans teaching taking all the students into account	2.8	0.7	2.1	4.2	48.4	44.5	92.9
Incorporate all students' interests into teaching	4.2	2.1	2.1	4.2	49.8	41.7	91.5
Frequently review the teaching program to update and adapt it to the class group	3.9	2.8	1.1	2.1	46.3	47.7	94.0
Designs back-up/curriculum support activities for all learners	2.8	1.8	1.1	2.5	47.0	47.7	94.7
Create activities that expand and enhance the curriculum.	4.6	2.8	1.8	3.2	43.8	48.4	92.2
Incorporate a range of instructional approaches in my teaching.	3.2	1.8	1.4	2.1	40.6	54.1	94.7
Average	3.5	2.0	1.6	3.1	47.0	46.3	93.3

Source: Author's field data 2023.

The study assessed whether learners are present in school and classes. The results indicated that the majority of schools have learners present in school and classes (92.9%). This suggests a high level of student attendance, indicating that students are actively participating in their education and benefiting from classroom instruction.

Moreover, the findings revealed that student diversity is seen by the schools as enriching the education process (93.6%), indicating that the diverse backgrounds and experiences of students enhance learning opportunities and create a dynamic learning environment. Additionally, the results showed that teaching plans in the schools take all students into account (92.9%), indicating that the school aims to provide inclusive education by considering the diverse needs, abilities, and interests of all students in the planning process.

Furthermore, the results indicated that efforts are made by schools to incorporate students' interests into teaching (91.5%), suggesting that the school recognizes the importance of engaging students by aligning instruction with their interests and preferences.

Additionally, the findings showed that the teaching programs in the schools are frequently reviewed to accommodate the needs of the classes (94.0%). This demonstrates a commitment to ongoing improvement and responsiveness to the evolving needs of students. Moreover, the schools design back-up/curriculum support activities for all learners (94.7%), indicating a proactive approach to providing additional support and resources to ensure the success of all students.

The research findings also indicated that 92.2% of the schools implement activities to broaden and enhance the curriculum. This demonstrates the schools' commitment to offering students chances to exceed the regular curriculum, fostering more profound learning and active involvement.

Lastly, the results showed that a diverse range of methodological strategies is employed in the schools (94.7%), indicating a commitment to differentiation and catering to different learning styles and preferences.

In summary, the schools demonstrated inclusive practices in terms of the presence of students in school and classes. It recognizes and values student diversity, considers individual needs and interests in teaching plans, incorporates students' interests into instruction, and regularly reviews and adapts the teaching program. These efforts contribute to creating an inclusive and engaging learning environment that supports the success and well-being of all students as shown in Table 4.10.

4.6.3.3 Participation of all learners

The following table presents the involvement of all students in various activities.

Table 4. 11: The level of participation of learners

Participation of all learners	SD+D (%)	SD (%)	D (%)	NS (%)	A (%)	SA (%)	SA+A (%)
All learners participate in school and classes	3.5	1.4	2.1	2.5	42.8	51.2	94.0
All learners participate in co-curricular activities equally	3.2	1.4	1.8	2.8	44.5	49.5	94.0
Establishes diverse collaborative teams in the classroom.	4.6	1.8	2.8	0.7	47.0	47.7	94.7
Reorganize the seating arrangement in the classroom based on the type of activity.	3.2	1.4	1.8	2.5	46.6	47.7	94.3
Uses flexible grouping of students	3.9	2.1	1.8	2.1	43.5	50.5	94.0
Provides additional time for students who are unable to complete a task within the allocated time frame.	3.2	2.1	1.1	2.1	45.2	49.5	94.7
Have extra activities for students who finish tasks early	4.2	1.8	2.5	4.6	48.1	43.1	91.2
Recognizes and addresses potential challenges or hindrances that may affect students' ability to learn and participate.	5.7	2.8	2.8	2.8	50.9	40.6	91.5
Ensures that individual students are provided with personalized assistance and assistance tailored to their specific needs.	4.6	1.4	3.2	1.8	49.5	44.2	93.6
It is ideal for students to receive support within the classroom environment alongside their peers.	3.9	1.8	2.1	2.8	47.9	45.4	93.3
All teachers, rather than only specialists, are responsible for providing support.	3.2	1.1	2.1	3.2	44.9	48.8	93.6
Average	3.9	1.7	2.2	2.5	46.4	47.1	93.5

Source: Field data, 2023

The table above shows the participation of all learners

In assessing whether all learners participate in school and classes, the results indicated a high level of participation with the majority of learners actively participating in school and classes (94.0%). This suggests an inclusive environment where all students are encouraged to engage in learning activities.

Additionally, the findings also revealed that schools make efforts to ensure equal participation of all learners in co-curricular activities (94.0%), indicating that the school values inclusivity beyond academic settings and promotes equal access to extracurricular opportunities.

The research indicated that most schools (94.7%) implemented diverse work groups within the classroom setting. This practice promotes collaboration and interaction among students with diverse abilities and backgrounds, fostering a sense of inclusivity and encouraging peer learning. Furthermore, the results also showed that the classroom distribution is adjusted to accommodate different activities (94.3%), indicating a flexible learning environment that supports varied instructional approaches and caters to different learning needs.

Moreover, the use of flexible grouping of students was evaluated. The findings indicated that flexible grouping is employed (94.0%), allowing for the formation of groups based on individual needs, interests, or learning styles, thereby promoting a personalized and inclusive approach to instruction.

Moreover, the findings also revealed that a considerable percentage (94.7%) of schools provide additional time for students who are unable to complete assignments within the designated time frame. This acknowledgment of varying learning speeds ensures that all students have an equitable chance to successfully complete tasks. Similarly, the research discovered that schools offer supplementary activities to students who finish assignments ahead of schedule (91.2%). This approach fosters student engagement and encourages them to expand their learning beyond the standard curriculum, addressing diverse educational requirements.

Additionally, the results revealed that schools demonstrate a proactive approach in identifying and addressing potential barriers or obstacles that may hinder students' learning and participation (91.5%). This proactive stance underscores the schools'

dedication to recognizing and resolving these challenges, ultimately cultivating an inclusive educational setting.

Moreover, the schools guarantee that every student receives individualized support tailored to their specific needs (93.6%).This reflects a commitment to individualized instruction and the provision of necessary resources and assistance to support students' diverse learning needs. Likewise, the findings also indicated a preference for in-classroom support in these schools (93.3%), which promotes inclusive practices and maintains a sense of belonging within the classroom community.

Lastly, the results indicated that most schools value a shared responsibility among all teachers (93.6%), emphasizing the collaborative effort to support all students' learning and participation.

In summary, the schools demonstrated inclusive practices in terms of the participation of all learners. It promotes equal participation in both academic and co-curricular activities, fosters collaboration through heterogeneous work groups, adjusts classroom distribution to cater to different activities, and utilizes flexible grouping strategies. These efforts contribute to creating an inclusive learning environment where all students can actively participate, engage, and succeed as shown in Table 4.11.

4.6.3.4 Achievement for All Learners

Table 4. 12: The level of achievement of learners

Achievement for all learners	SD+D (%)	SD (%)	D (%)	NS (%)	A (%)	SA (%)	SA+A (%)
The evaluation standards in my program exhibit a high degree of adaptability.	4.2	2.1	2.1	2.1	50.5	43.1	93.6
All students are assessed equally using the same system	3.9	2.1	1.8	1.8	42.4	51.9	94.3
Uses various tools to evaluate learning	4.6	2.8	1.8	2.1	47.0	46.3	93.3
My assessment is based not only on the final grade but on the progress made by the student	4.3	2.5	1.8	3.2	51.1	41.5	92.6
Students are assessed with individual and group grades to rate individual and group work	2.8	2.5	0.4	1.4	46.6	49.1	95.8
Students who need more time to complete tests and exams are allowed	7.8	3.2	4.6	2.8	46.6	42.8	89.4

The school provides students and families with information about the transit from one educational stage to the next	3.9	2.1	1.8	2.8	37.8	55.5	93.3
The school runs activities to familiarize students with their next school	3.9	2.1	1.8	4.9	39.9	51.2	91.2
Average	4.4	2.4	2.0	2.6	45.2	47.7	92.9

Source: Field research, 2023

The results indicated that the assessment criteria in most schools are flexible (93.6%), suggesting that the schools recognize and accommodate different learning styles, abilities, and preferences when evaluating students' performance.

Additionally, the findings revealed that schools are making efforts to ensure equitable assessment practices (94.3%), indicating that the schools value fairness and consistency in evaluating students' achievements.

Additionally, the results also showed that multiple assessment tools are utilized (93.3%) by schools when assessing performance, indicating a comprehensive approach to assessing students' progress and understanding their diverse strengths and areas for improvement.

Furthermore, the results indicated that schools take into account progress during assessment (92.6%), reflecting a holistic view of student achievement that acknowledges individual growth and development over time. Additionally, the school employs a grading system that evaluates both individual and group work, acknowledging the significance of both individual contributions and collaborative efforts (95.8%). This approach fosters a spirit of teamwork and shared accountability.

Likewise, the findings also indicated that students requiring more time during assessments are given the necessary accommodations (89.4%), ensuring that they have an equal opportunity to demonstrate their knowledge and skills.

Furthermore, the school ensures that students and their families receive comprehensive guidance and information regarding the progression from one educational phase to another (93.3%). This proactive approach aids students in seamlessly transitioning

between academic stages and empowers them to navigate their educational journeys effectively.

Furthermore, the study found that schools run activities to familiarize students with their next school (91.2%). This proactive approach assists students in becoming familiar with the environment, expectations, and opportunities awaiting them, promoting a seamless transition.

In summary, schools demonstrated inclusive practices in terms of achievement for all learners. It incorporates flexibility in the assessment criteria, ensures equal assessment using a consistent system, and utilizes various tools to evaluate learning and many more. These efforts contribute to creating an inclusive learning environment where all students have equal opportunities to demonstrate their abilities, progress, and achieve their full potential as shown in Table 4.12.

4.7 Bivariate analysis of the level of inclusion

Table 4. 13: Group statistics of level of inclusion in schools

Variables	School	N	Mean	SD	SE Mean
Context	SA(GHS)	197	4.3206	.46638	.03323
	SB(GAS)	86	4.2730	.49428	.05330
Resources	SA(GHS)	197	4.2928	.53212	.03791
	SB(GAS)	86	4.0459	.67294	.07256
Process	SA(GHS)	197	4.3721	.37691	.02685
	SB(GAS)	86	4.2972	.51362	.05538

Source: Field research, 2023

In relation to the context dimension of inclusion, an independent samples t-test was conducted to examine if there were any notable variations in the average scores between SA and SB. However, the outcomes of this test revealed no statistically significant difference in the mean scores between the two groups.Both schools have relatively high

mean scores (around 4.27 to 4.32 out of 5), suggesting that they provide a conducive and supportive context for students with visual impairment. The lack of significant difference implies that both schools have worked towards creating an inclusive and positive learning environment in terms of the overall context.

Regarding the resources dimension of inclusion, the independent samples t-test yielded a significant distinction in the average scores between SA and SB. This indicates that there is a notable divergence in the resources available to the two groups.The p-value ($p < 0.001$) indicates that the difference is statistically significant. SA has a higher mean score (4.29 out of 5) compared to SB (4.05 out of 5), indicating that SA provides better resources to support students with visual impairment. These resources may include assistive devices, learning materials, and equipment specifically tailored for visually impaired students.

This finding is similar to the results of a qualitative interview with the school head teacher of SB.

"It is a government policy that all schools should be Inclusive. Whereas the government has invested heavily in Inclusive education we still ask for more but inclusive education has taken off for all government-aided schools in Uganda" H/T SB 2023.

In an interview with learners from school A: One learner noted that

"*Inclusive Education is a good education system because it has allowed me to share with my friends. There are many in this school including even the hearing impaired, the lame, and others. So we are well included"* Learner SA 2023.

Table 4. 14: Independent samples test of level of inclusion in schools

		Levene's tests of equality of Variance		Test for equality of means		
		F	Sig.	t	df	Sig.
Context	Equal variances assumed	.262	.609	.775	281	.439
	Equal variances not assumed			.757	153.836	.450

Resources	Equal variances assumed	12.319	.001	3.303	281	.001
	Equal variances not assumed			3.016	133.425	.003
Process	Equal variances assumed	7.080	.008	1.372	281	.171
	Equal variances not assumed			1.218	126.627	.225

Source: Field data, 2023

In terms of process inclusion, the independent samples t-test for the process dimension indicates that there is no significant difference in the mean scores between Gulu High School and Gulu Army SS. Both schools have mean scores around 4.30 out of 5, suggesting that they have implemented effective processes and strategies to ensure inclusive education for visually impaired students. The lack of significant difference implies that both schools have similar approaches to address the learning needs of students with visual impairment.

4.8 The relationship between school environment and Inclusion

Table 4. 15: Pearson Correlations

			Inclusive Education	Physical LE	Social LE
Spearman's rho	Inclusive Education	Correlation Coefficient	1.000	0.544**	0.676**
		Sig. (2-tailed)	.	0.000	0.000
		N	283	283	283
	Physical LE	Correlation Coefficient	0.544**	1.000	0.539**
		Sig. (2-tailed)	0.000	.	0.000
		N	283	283	283
	Social LE	Correlation Coefficient	0.676**	0.539**	1.000
		Sig. (2-tailed)	0.000	0.000	.
		N	283	283	283

**. Correlation is significant at the 0.01 level (2-tailed).

The table above on correlations shows that;

To examine the relation between school environment and inclusion among learners, a Spearman's rank order correlation coefficient test and multiple linear regression were performed with the school learning environment (PLE, SLE) as the independent variable and the level of inclusion as the dependent variable.

The correlation analysis suggests that both the physical learning environment and the social learning environment are significantly related to Inclusive Education. This is because, there is a significant positive correlation between Physical LE and Inclusive Education, with a Spearman's rho correlation coefficient of 0.544 ($p < .01$) indicating a moderate positive relationship between the quality of the physical learning environment and the level of inclusiveness in education. The results suggest that improvements in the physical learning environment may contribute to creating a more inclusive educational setting. Similarly, there is a significant positive correlation between Social LE and Inclusive Education, with a Spearman's rho correlation coefficient of 0.676 ($p < .01$) indicating a strong and positive relationship between the social learning environment and the level of inclusiveness in education. The results suggest that fostering a supportive and inclusive social learning environment can positively impact the overall inclusiveness of education.

Specifically, the study revealed that "Physical learning environment" had a significant positive influence on the level of inclusive education with ($\beta = 0.107$, $p<0.05$), indicating that a one-unit increase in the level of physical learning environment in schools is associated with a 0.107 unit increase in the inclusive education score. Additionally, "Social learning environment" was also a significant positive predictor of the level of inclusive education in schools with ($\beta = 0.596$, $p<0.01$), suggesting that a one-unit increase in the level of social learning environment in schools is associated with a 0.596 unit increase in the inclusive education score in the school.

In conclusion, the regression analysis reveals that both the social learning environment and physical learning environment variables have a significant positive impact on inclusive education. A supportive social learning environment and an optimal physical

learning environment are associated with higher scores in inclusive education. These findings provide valuable insights for promoting and enhancing inclusive practices within the educational context.

Regression Analysis for the predictive relationship between school environment and Inclusion

Table 4. 16: regression analysis is of predictors of the level of inclusion

Independent Variables	Coefficient	95.0% Confidence Interval for B		Collinearity Statistics	
		Lower	Upper	Tolerance	VIF
(Constant)	1.29***	0.972	1.610		
Physical learning environment	0.107**	0.023	0.191	0.547	1.828
Social learning environment	0.596***	0.500	0.693	0.547	1.828
R	0.749[a]				
R Square	0.561				
Adjusted R Square	0.558				
F	178.891				
Sig. F	0.000				

a. Predictors: (Constant), Social Learning Environment, Physical Learning Environment

b. Note: *, **, *** represent significance at 10%, 5% and 1% respectively.

The table above shows a multiple regression analysis output for the school environment and inclusion.

Considering the regression analysis, the regression model was generally significant with F (2, 280) = 178.89, $p<0.01$ indicating that the independent variables collectively have a significant impact on the dependent variable, $R^2 = 0.561$ indicating that approximately 56.1% of the variance in the dependent variable can be explained by the independent variables included in the model. Additionally, the tolerance and VIF values suggest that multicollinearity is not a concern as shown in Table 4.16.

Chapter Five:

Discussion, Conclusion, and Recommendation

5.0 Introduction

This chapter presented the summary of the Results, the Discussion, according to the study research questions, and the Conclusion and Recommendation.

5.1 Status of school Environment in Inclusive secondary schools

Data was collected from two inclusive secondary schools in Gulu City and analyzed using a T-test and results showed that;

For the physical environment, results showed that it was conducive to Inclusive Education with Leven's test showing further that there was no significant difference in the status of the physical learning between the two schools

($t = 1.464$, $p > 0.05$). Implying therefore that both schools have made visible efforts to ensure students with visual impairments are accommodated in the school environment.

Similarly, the Social learning environment was a significant factor in determining Inclusive education for learners with visual impairment with a t-test value ($t = 0.094$, $p > 0.05$). The analysis of the social learning environment between the two schools found no statistically significant difference in terms of status.

The research findings regarding the physical learning environment align with a previous study conducted by Ezike (2018), which emphasized the importance of creating a conducive learning environment for all students, particularly those with

visual impairments. Similarly, Roebuck (2020) argued in their study that the physical arrangement of a school plays a crucial role in determining the level of student engagement and participation.

Regarding the social learning environment, findings were in agreement with a study by (Bhavana and Achi, 2018) who dramatized the role of the social learning environment on learner's academic achievement. A similar view was held by (Melesse and Molla, 2018) who argue that a social learning environment manifested in the form of peer-to-peer interaction was beneficial to all learners since it fosters sharing between the learners.

Whereas literature is abundantly clear that the learning environment (physical and social) determines academic success. (Korir and Kemboi 2014; Usaini, Abubakar & Bichi, 2015). Some studies articulate the role of individual factors to be a more definitive factor in determining the success of learners (Suzuki and Tukei 2020, purity et al 2017) which is in disagreement with our study.

5.2. The level of Inclusive Education of Visually Impaired Learners.

Study findings revealed that the level of inclusion of learners with visual impairment was not significantly different in the two inclusive schools ($p<0.01$), in terms of context. While the values were statistically significant for resources and the process of Inclusion. Implying therefore that resources are important for learners with visual Impairment.

This study is in agreement with (Azorin 2016) who noted when the school context is well managed its stability can promote Inclusive Education for all learners including those with Visual Impairment. A similar view held by (Ainscow 2020, Forlin et al 2014, and Loreman et al 2019,) noted that the context of Inclusive Education is particularly essential for learners with visual impairment because they depend heavily on the learning environment for them to maneuver and therefore every education system should invest heavily in Inclusive Education context if it's to benefit learners with visual impairment.

The study therefore concludes that Inclusive Education (context, resource, process) are important determinant for the success of Inclusive education for visually impaired

learners. So we recommend that Government policymakers and school systems uphold Inclusive Education Virtues (context, resource & and process) to enhance learning for all learners including those with visual impairment.

5.3 Relationship between School Environment and Inclusive Education.

The study findings revealed that there is a strong statistically significant correlation between School Environment (Physical and social) and Inclusive Education (Context, Resource & Process).

This finding is in agreement with studies by (Kraemer et al 2016) who noted that School Environment plays a crucial role in promoting Inclusive Education for Visually Impaired learners.

Similarly, a study by (Kauffman & Hallahan 2015, Salem 2015) noted that School Environment is a critical factor that affects the success of Inclusive Education programs.

However, the study is contrary to the findings by (Grzegorczk, 2015) who argue that the success of Learners with Visual impairment in Inclusive Education depends on technology, especially assistive devices. It is also contrary to a study by (Lian et al 2015) who showed that Universal Design for Learning Methods (UDL) had a positive association with Inclusive attitudes.

5.4 Discussion

The social model of disability theory argues that disability is not an individual problem but rather a result of the way society is structured. It posits that negative attitudes, physical and social barriers, and discriminatory practices in society contribute to disabling individuals with impairments. In the context of education and the inclusion of learners with visual impairment, the social model of disability is very relevant. It highlights the need for schools to move beyond the medical model of disability that views learners with visual impairment as having a problem that needs to be fixed, to a social model that considers how the school environment can be adapted to ensure that these learners are included in all aspects of the education system.

The findings of this research support the social model of disability theory by showing that the inclusion of learners with visual impairment is not just about providing special resources, but also about changing the way schools are structured. Participants in the study highlight the need for schools to be more inclusive, accommodating, and accepting of learners with visual impairment. They identified the need for physical modifications to school buildings, the provision of assistive technologies, and teachers and school staff who are better trained to support these learners.

The findings of this study emphasize the significance of embracing a social model of disability within the educational context, highlighting the imperative for schools to prioritize inclusivity and accessibility in their policies and practices. By doing so, schools can establish a more inclusive and empowering learning environment that caters to the needs of all students, irrespective of their abilities.

The theoretical framework for this research is supported by various studies that have explored the social model of disability. For instance, Oliver (1990) proposed that disability is a social construct that goes beyond the individual to include societal barriers. Similarly, the United Nations Educational, Scientific and Cultural Organization (UNESCO) underscores the need for inclusive education with a focus on participation and accessibility for all learners, including those with disabilities (UNESCO, 2015). Moreover, Baker (2006) highlights the significance of inclusive education principles, which emphasize creating an accommodating learning environment for all learners, while taking into account the specific needs of those with disabilities.

Furthermore, previous studies have shown that accommodating learners with visual impairment in inclusive education goes beyond providing special resources. For instance, Wolffe (2013) emphasizes the importance of inclusive teaching practices and accessible learning materials in ensuring the full participation of learners with visual impairment in education. Additionally, Hannah and Wolfenden (2014) recognize the need for a change in attitudes towards disability and the adoption of inclusive teaching practices in mainstream education for learners with visual impairment.

To sum up, the research findings of this study and supporting literature emphasize the significance of integrating the social model of disability into educational policies and

practices. This integration will help improve inclusivity and accessibility for all students, including those with visual impairments.

5.5 conclusions

The research findings reveal various strategies that schools can implement to enhance the learning environment for students with visual impairments and promote inclusivity. Here are some ways in which schools can improve their learning environment based on these findings.Firstly, it was found that schools need to be more inclusive and accommodating of learners with visual impairment. This can be achieved by ensuring that all learning materials and resources are accessible to learners with visual impairment. This includes providing Braille books, audio materials, and other assistive technologies.

Secondly, it was found that teachers and other school staff need to be better trained in how to effectively include learners with visual impairment in their classrooms. This includes developing a better understanding of the unique needs of these learners and learning how to use assistive technologies to support them.

Thirdly, the physical environment of the school needs to be adapted to make it more accessible to learners with visual impairment. This can include installing tactile strips and other visible markers to guide learners around the school, providing ramps and handrails, and ensuring that all classrooms are well-lit.

Lastly, it is crucial for schools to cultivate a culture that embraces inclusive education and cultivates a sense of inclusivity and acceptance for students with visual impairments. This entails fostering an atmosphere of respect and empathy for all students and establishing a supportive and empowering environment that encourages their growth and development.

5.6 recommendation

On the Status of the school environment in Inclusive secondary schools, we recommend that schools should ensure that the learning environment is accommodative of all learners especially those with special educational needs in Inclusive Education because

these learners rely on the learning environment (Physical and Social) for their survival, retention, and completion.

On the level of Inclusive Education of Visually Impaired Learners, so we recommend that Government policymakers and school Administrators uphold Inclusive Education Virtues (context, resource & and process) to enhance learning for all learners including those with visual impairment.

On the relationship between school environment and Inclusion, we recommend that government, development partners, and school proprietors invest heavily in improving the Physical and Social Environment of Inclusive Schools to enhance the presence, participation, and achievement of Visually Impaired Learners.

5.7 suggestions for further research

Further studies should focus on the psychological learning environment of all the learners in Inclusive education, for instance how learners with special needs and those without special needs are influenced by the psychological learning environment in Inclusive schools.

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APPENDIX 1: QUESTIONNAIRE

GULU UNIVERSITY

Faculty of Education and Humanities

Department of Curriculum Studies

Introduction

I am Okete Martin conducting a study on "***School environment and Inclusive education of visually impaired learners in Secondary schools in Gulu city"*** You are requested to participate in this study to make it generate knowledge that will improve education for visually impaired learners in Uganda. I appreciate that participating in this Questionnaire survey will require you to reserve time to respond to our study questions. I thank you for accepting to participate in the study.

Respondent Identification

Questionnaire …… Position…….

Class…….

Gender ……

SECTION A: SCHOOL ENVIRONMENT

Please tick the most appropriate response

SD= Strongly Disagree D=Disagree NS= Not Sure A=Agree SA= Strongly Agree

SD=1, D=2, NS=3 A=4, SA=5

Questionnaire for teachers

Physical Learning environment	SD	D	NS	A	SA
An area or space that is safe for all learners exists.					
The physical environment is protective of all learners including those with special needs.					
Safe drinking water is available for all learners and school staff					

Adequate sanitation facilities are available for all learners, including separate latrines for female learners and functional hand washing facilities with soap (use Government latrines to students ratio 1:50).					
The play area is safe for all learners.					
Schools and other learning environments are located near the populations they serve. (CO: proximity is defined as less than ___km)					
Learners participate in health–promotion programs, such as deworming and nutritional (micronutrients) supplements and health education – as part of the co-curricular programs.					
The school buildings (Dormitory, Class, Toilets, Offices. Staff room) are ramped					
There are special toilets for learners with physical disabilities, Blind learners					
The school has braille for all the blind and visually impaired					
The classrooms are well-ventilated and spacious enough for all learners					
There are walkways in school for visually impaired learners					
The dormitories are well-ventilated, light and spacious, and furnished with appropriate beds					
Play material is available for all learners including learners SEND					
Social Learning environment					
Teachers are trained on child rights and protection					
The social learning environment encourages expression of child rights and learners are knowledgeable about their rights (eg to participate in classroom activities, to be protected from humiliation and abuse).					
Learners participate actively in the decision-making activities in their schools (eg Clubs, SMC activities, etc)					
The school has a well-constituted and active prefectural body which is respected by the staff					
Learning is supported through the use of relevant visual aids and other teaching materials.					
Teachers ask individual questions and interact with the learners freely					
Teachers use the home language (the mother tongue of the majority of learners to explain key concepts and support learning as needed for all levels)					
Teachers adapt lessons to the needs and abilities of learners in their classes (eg girls, learners with disabilities, sick, malnourished, language-minority, and traditionally excluded groups.)					

Teachers are friendly in their interaction with other learners					
Learners interact freely with each other in school, classes, and dormitory					
There is a clear mechanism of communication in school between teachers, administration, and learners					
There is a talking compound handling especially social issues like bullying, discipline, etc.					
There is good interpersonal relations between all learners					

SECTION B: INCLUSIVE EDUCATION

Please Tick the most appropriate response that best reflects how much you agree or disagree with the statements (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree)					
THE THEMIS INCLUSION TOOLS: *Adapted from Azorin & Ainscow (2020); Slee, (2018), Stufflebeam, (1971)*					
DIMENSION A: CONTEXTS	**SD 1**	**D 2**	**NS 3**	**A 4**	**SA 5**
I am aware of my students' socioeconomic situation					
I have information to advise students who are more vulnerable/at greater risk of exclusion					
Students come from different cultures					
I believe that the attention to diversity measures under current legislation responds to the needs of the students at my school					
The Leadership Team distributes tasks equally					
The Leadership Team considers the opinions of others when making decisions					
The Leadership Team promotes the development of inclusive practices					
I identify with values linked to the principle of inclusion (equity, equality, tolerance, solidarity, social justice, respect for diversity)					
My daily practices foster inclusive values among my students					
Preventing discrimination is part of my teaching work					
Teachers and students have a mutual respect					
There is a good coexistence environment in the school					
I collaborate with my colleagues					
I share teaching materials with other teachers at my school					

I perform co-teaching activities (two or more teachers giving lectures in the same classroom)					
I maintain ongoing communication with the families					
I encourage the families to get involved in their children's education					
Families participate actively in the school life					
Some volunteers collaborate in the education process (old students, retired people, families and others)					
During the school year, I carry out activities with associations that cooperate with the school (those devoted to disabilities or other purposes)					
The local authorities are receptive to requests to get involved in campaigns or to provide services within the school					
The school is involved in networking projects with another school (regional, national, or abroad partnerships)					
The school collaborates with other socio-educational institutions in the area					
DIMENSION B: RESOURCES	SD	D	NS	A	SA
I take part in ongoing training in attention/responses to diversity (Courses, Seminars, Conferences)					
I collaborate in teaching innovation projects to improve inclusion					
The staff at the school includes enough specialists/auxiliary workers to attend to its student diversity					
I have external advice whenever I need it (e.g. Educational Guidance and Psycho pedagogical Services)					
I use peer tutoring for students to help one another					
The families are a valuable human resource for the school					
I enjoy a wide range of teaching resources that respond to all my students' characteristics					
I regularly take stock of the materials to take maximum advantage of my school's resources					
All the classrooms are technologically equipped (beamer, projector, computer, smart board)					
The computer rooms are equipped with enough computers for the number of students					
Students who need alternative means to access the curriculum, information, and communication have these available					
The school's installations are accessible					

The school's equipment and furniture is adapted to students' needs					
The school offers out-of-school activities (theatre, cinema, choir, dancing, radio, press)					
The school offers out-of-school sports activities					
The school allows its installations to be used for other activities during holiday periods					
The school organizes out-of-school activities for families (Workshops, Schools for Parents)					
The school has a resources bank for students who need it (e.g. loans of textbooks)					
The school manages the community/district resources effectively					
DIMENSION C: PROCESSES					
Access to school and curriculum	SD	D	NS	A	SA
School is accessible to all learners					
The school is near the community they serve					
The school welcomes all learners					
The school reaches out to the community to encourage them to send children to school					
Presence in school and classes	SD	D	NS	A	SA
Learners are present in school and classes					
Student diversity enriches the education process					
I plan my teaching by taking all the students into account					
I incorporate all students' interests into my teaching					
I frequently review my teaching program to update and adapt it to the class group					
I design backup/curriculum support activities for all learners					
I design activities to extend/enrich the curriculum					
I use various methodological strategies throughout my teaching (e.g. learning by projects, learning corners, research work, cooperative learning)					
Participation of all learners	SD	D	NS	A	SA
All learners participate in school and classes					
All learners participate in co-curricular activities equally					
I set up heterogeneous work groups in the classroom					
I rearrange the classroom distribution according to the type of activity					
I use a flexible grouping of students					

I offer extra time to students who do not finish a task in the set time					
I have extra activities for students who finish tasks early					
The support takes into account possible barriers/obstacles in students' learning and participation					
All students receive the specific support they require					
Students preferably receive support in the classroom with their reference group					
The support action lies with all the teachers, not just the specialists					
Achievement for all learners	SD	D	NS	A	SA
The assessment criteria in my program are flexible					
All students are assessed equally using the same system					
I use various tools to evaluate learning					
My assessment is based not only on the final grade but on the progress made by the student					
Students need to be assessed with individual and group grades to rate their individual and group work					
Students who need more time to complete tests and exams are allowed it					
The school provides students and families with information about the transit from one educational stage to the next					
The school runs activities to familiarize students with their next school (e.g. visit to the primary/secondary/vocational school or university)					

Thank you

Appendix II: Interview Guides

For Students

1. What are the challenges you face in studying?
2. How does the school help you to learn?
3. How can the learning environment be improved for your learning
4. Are there any classes where you are missing support
5. What do you think that the school and your teachers are doing that is useful for you
6. Which parts of the school are safe for you
7. Can you give an example of a time that felt that you were supported in learning
8. Do you feel included in school life and activities
9. How are treated by other students and teachers
10. Do they treat you well in the dining hall?
11. How is the care in the dormitory?
12. Could you have someone who sometimes helps you in washing clothes?
13. Do you know how to read braille?
14. What are some of the places which are not safe?
15. In which subjects do you use braille machines
16. How do you feel whenever you disturbed
17. Do you feel stress during studying
18. Are classrooms labeled with braille signs?
19. How do you use a projector?

Interview Guides For Teachers

Administration and teachers of visually impaired learners' questionnaire

Dear respondent

I am Okete Martin pursuing a master's degree in Education (Curriculum Studies) at Gulu University. In my research, I am Investigating the School Environment and Inclusive Education of Visually Impaired Learners in Gulu City. Therefore, I kindly request you to respond to the questionnaire to help me ascertain my findings your response will only be used for academic purposes and they will be treated in good faith with confidentiality.

Thanks in anticipation.

A. Demographic information of respondent.

1. Name of respondent (optional)
   ……..…….……
2. Sex a) female b) male
3. Age group

a) 18-25 b) 26-33 c) 34 d) d)42-49 e) 50 e)50 and above

4. Marital status

a) Single b) married c) divorced) d)separated

e) widowed

5. Academic level attained

a) No Schooling a b) primary level :) s c)secondary level

d) Tertiary level e e) others, specify ……..…….

6. For how long have you been in this school……..……..…….
7. a) Name of the Division……b) Ward …….

STATUS OF SCHOOL ENVIRONMENT

1. What is the current status of inclusive Education in your school? (Are you receiving more learners than in the past years? If yes what is being done to handle the situation

……
……..……
……
……..……
……

2. Is your school meant for all categories of learners ie both normal learners and those with visual impairment

……
……
……
……...……
……

3. What is the composition of learners with visual impairment in your school?

……
……..……
……

LEVEL OF INCLUSIVE EDUCATION

4. Do you have enough facilities (infrastructural) to handle visually impaired learners?

……
……
……

5. How many specialists (teachers and non-teaching staff are in place to handle learners with visual impairment?

……
……
……

6. Do you get any external support other than from the Ministry of Education and Sports to help you handle learners with visual impairment effectively?

……
……

……

7. What challenges does the school encounter in educating the visually impaired learners in your school?

……
……
……

……

8. How are some of these challenges (if) any being addressed in your school?

……
……

……

INFLUENCE OF SCHOOL ENVIRONMENT ON RELATIONSHIP BETWEEN INCLUSIVE EDUCATION AND LEARNERS WITH VISUAL IMPAIRMENT.

9. How does the school environment cater to the needs of learners with visual impairments and inclusive education in the following areas?

a) Dining Hall

……
……
……

b) Dormitory

……
……

……

c) Classroom

……
……

……

d) Games and sports

……
……
……
……..

e) School rules and regulations

……
……
……

f) Bathrooms and washrooms

……
……
……

g) School uniform

……
……
……

Thank you for your participation

Appendix III: Introductory Letter

GULU UNIVERSITY

OFFICE OF THE DEAN
FACULTY OF EDUCATION AND HUMANITIES

P.O. BOX 166, GULU UGANDA
TEL:+256 0471-432922

18th November 2022

TO WHOM IT MAY CONCERN`

This is to introduce to you Okete Martin Reg.No: 20/U/2676/MFC/PS a student pursuing a programme of study leading to the award of Master of Curriculum Studies of Gulu University.

He is undertaking research on the topic: *School Environment and Inclusive Education of Visually Impaired Learners in Gulu city: A case study of Bardege layibi division.* which is in partial fulfilment of the requirements for the award.

Any assistance given to him in relation to his research work will be highly appreciated.

Yours sincerely

GULU UNIVERSITY
18 NOV 2022
FACULTY OF EDUCATION AND HUMANITIES

Dr. Ofoyuru Denis .T
Dean Faculty Education and Humanities

Appendix IV: Krejcie and Morgan Table for Sample Size Determination

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	256	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: *From R.V. Krejcie& Morgan (1970), Determining Sample Size of Research Activities, Educational and psychological measurement, 30,608, Sage Publications*

Appendix V: Plagiarism check report