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**THE EFFECT OF POVERTY ON ACADEMIC ACHIEVEMENT OF LEARNERS
WITH DISABILITIES IN NKANKA SECTOR OF RUSIZI DISTRICT**

BY:

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A thesis submitted to the School of Inclusive and Special Needs Education in partial fulfilment of
the requirements for the Degree of Master of Education in Special Needs Education

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DECLARATION

I, UMUTONI AGNES declare that this thesis is entirely mine and solely a result of my own effort. It has never been submitted to any other for the academia award. This research has been complemented by referenced sources duly acknowledged.

UMUTONI AGNES

Signature.....date.....

.....

APPROVAL

This to certify that the thesis entitled “**The effect of Poverty on Academic Achievement of Learners with Disabilities in Nkanka Sector of Rusizi District**” was undertaken by UMUTONI AGNES under my supervision.

Supervisor’s Names: Dr HABINSHUTI GONZAGUE

Signature.....

Date.....

DEDICATION

I dedicate this research thesis to my family and relatives especially to my husband NSABIMANA THEOGENE, my mother Mrs. NYIRANSABIMANA DOROTHEE, my father Mr. BIGIRIMANA EVALISTE and also my supervisor who offered me all the support I needed to compile this thesis.

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LIST OF ACRONYMS

CRDC	Civil Rights Data Collection
DFID	Department for International Development
EBP	Evidence-Based Practices
IDEA	Individual with Disability Act
GNI	Gross National Income
GS	Groupe Scolaire
HIC	Higher Income Countries
IDEA	Individual with Disabilities Education Improvement Act
LN	Learning Disabilities
LIC	Low Income Countries
MINEDUC	Ministry of Education
NAEP	National Assessment of Educational Progress
NESA	National Examinations and School Inspection Authority
NISR	National Institute of Statistics of Rwanda
NLTS	National Longitudinal Transitional Study
OECD	Organisation for Economic Cooperation and Development
REB	Rwanda Basic Education Board
SEI	Sector Education Inspector
SEN	Special Education Needs
UN	United Nations
USA	United States of America
UNESCO	United Nations Education, Scientific and Cultural Organization
WHO	World Health Organization

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ABSTRACT

The research aimed to study how poverty affects the academic performance of students with disabilities in the Nkanka sector, Rusizi district. Three objectives and the corresponding research questions guided the study namely identification of socioeconomic factors that influence the educational outcomes of learners with disabilities living in poverty in the Nkanka Sector of Rusizi District, assessment of the impact of poverty on the academic achievement among learners with disabilities in the Nkanka Sector of Rusizi District and suggestion of strategies and recommendations to improve academic achievement among low-income students with disabilities in the Nkanka Sector of Rusizi District. The study was a descriptive correlational research design using both qualitative and quantitative approaches. The target population was two hundred and thirty-three 3619 including teachers, students, head teachers, the SEI and parents out of whom a sample of 98 respondents was purposively and randomly selected from respectively three secondary schools namely: Colledge Nkanka, GS Nkanka and GS Cyibumba. The stratified sampling was also used to select parents and students. Data was collected using questionnaires, interview guide and documentary analysis. Data was analyzed with descriptive statistics such as frequency and percentage tables. Poverty was found to be linked to poor academic achievement among students with disabilities. Low-income families struggled to pay school fees and provide necessary materials for their children. The disabled children residing in impoverished environments often experience absenteeism, which negatively impact their academic performance in assessments and exams. Strategies such as fostering active engagement from all relevant stakeholders, providing thorough monitoring and guidance to students with special needs, facilitating effective communication between educators and students to establish a supportive learning environment, revising policies pertaining to special needs education and inclusive practices could help to improve academic achievement among low-income learners with disabilities. The study recommended providing resources and teacher training for students with disabilities in mainstream schools, improving socioeconomic conditions for low-income families, and prioritizing individuals with disabilities in existing initiatives. Collaboration between special and inclusive schools was also encouraged to enhance the participation of students with disabilities. Parents were urged to offer emotional and financial support for their children's academic success, especially in national examinations.

CHAPTER ONE: GENERAL INTRODUCTION AND BACKGROUND

1.0 Introduction

This chapter presents the general introduction, background of the study, problem statement, general objectives, research questions, conceptual framework, significance of the study, limitations and delimitations of the study.

1.2 Background to the study

The relevance of education in the total development of children cannot be disregarded. According to the Organisation for Economic Cooperation and Development (OECD, 2010), education may help individuals to develop skills, improve their social status and gain access to networks that could lead to enhanced social outcomes, independently from the effect of education on income. There is no doubt that without education, the world would be a worse place to live. Hence, the need for the inclusive education.

According to the United Nations (2015), people with disabilities are considered the world's largest minority and they are a part of every social category; men and women, children, different races and different cultures; among all social classes; wealthy and poor, highly educated people and those without education.

The World Health Organization's report indicates that around 15 % of the world's population has some sort of disability (WHO, 2011). These include all kinds of impairments; sensory impairment, (blindness/visual impairment, deaf/hard of hearing), physical impairments, psychosocial and developmental. Having a disability is, according to the United Nations, a combination of the actual impairment, such as being in a wheelchair, being blind or deaf and the socially constructed obstacles the person with the impairment faces (UN, 2015).

Throughout history, a significant number of children with disabilities have been denied access to basic education (WHO, 2011). The majority of education provided has taken place in distinct, specialized institutions catering to individuals with particular disabilities, including special schools for the deaf or blind (WHO, 2011). People with impairments are therefore more susceptible to stigmatization and marginalization in later life. Using specialized schools to separate disabled children from "non-disabled children" fosters early on the idea that this social group is distinct from children without disabilities (WHO, 2011).

The same is true of completely barring kids with disabilities from attending school. Exclusion and segregation encourage ignorance and stigmatize children with disabilities in society. Exclusion

from peer social connection occurs together with exclusion from fundamental schooling. One effect of this is that a child's basic talents will be limited from an early age, which may result in a lack of other abilities and a reduced standard of living as an adult (Department for International Development [DFID], 2000).

A research conducted in the United States of America by Martha and Sheryl (2011), revealed that, with the right supports, accommodations, and specially designed instruction as mandated by the Individual with Disability Act (IDEA), the majority of students with disabilities aged between 80 and 85 percent can meet the same achievement standards as other students.

As the United Nations (2015) confirmed, around 80 % of people living with a disability live in a low-income country. A low-income country is defined as a country with an economy with a gross national income (GNI) per capita of 1,045 USD or less (World Bank, 2016). Moreover, the majority of people with disabilities live in less developed countries by definition, and 150 million young people in these countries have a sensory, intellectual, or physical disability. Low-income countries are by definition resource-constrained, and as a result, people with disabilities are rarely the focus of political and social policy priorities. As a result, young people with disabilities are among the poorest and most marginalized in the world (Groce, 2004). In LICs, children and youth with disabilities are more likely to be out of school than those in high-income countries (HIC's) (WHO, 2011).

The National Institute of Statistics of Rwanda's (2022) census data shows that Rwanda has 11,537,934 persons aged 5 years and above out of whom 391,775 (174,949 males and 216,826 females) have disability. This implies that at the national level, 3.4 % of the resident population aged 5 years and above have a disability.

Similarly, the prevalence rate of disability is higher in rural areas (3.7%) than in urban areas (2.8%). The disaggregated results show that Eastern Province is the most affected with the highest prevalence of disability (3.7%). The least affected is City of Kigali (2.3%). The data indicates that only a small proportion of 0.5% of people aged 5 years and above experience severe disability, followed by 2.9 and 3.0 % of those having moderate and mild disabilities respectively. The prevalence rate of disability increases with an increase in age (NISR, 2022).

Researchers established a link between poverty and academic achievement of learners especially the ones with disability. For example, Johnson (2016) asserted substantial alterations in the structure of the brain in regions linked to memory and emotion make children raised in poverty

more likely to suffer from cognitive delays. Children who live in poverty may find it more difficult to buy books and toys that would stimulate their minds; as a result, their vocabulary may be smaller and their speech may be more directed.

Brito & Noble (2009) add that when compared to children raised in more affluent settings, developmental delays are more common in children raised in poverty. Children who come from lower socioeconomic homes are also more likely to have behavioral challenges in the classroom, poor performance on exams when asked to demonstrate their knowledge, emotional and mental health problems, and mental health disorders. Children who grow up in poverty have altered brain morphology in regions linked to emotion and memory.

Poverty disrupts brain development and leads to disruptive behavior in the classroom (Dike, 2017). Our bodies release the hormone cortisol in response to stress (Jensen, 2009). The prefrontal cortex and the hippocampus receive fewer neuron signals when cortisol builds up in our bodies. For learning, cognition, and working memory, the hippocampus and prefrontal cortex are both essential. Neurons in a child's frontal lobes may diminish as a result of ongoing stress. The ability of the youngster to plan, regulate impulsivity, and form judgments is attributed to this region of the brain. Additionally, it may harm the hippocampal tissue, which could lead to a decline in learning potential. Children raised in poverty experience many emotional and social challenges, chronic stressors, and cognitive lags due to significant changes in brain structure in areas related to memory and emotion, which result in lower academic achievement and more behavioural issues in the classroom.

According to studies done in the United States (Shandra, C.; Hogan, D., 2009), children with severe disabilities had a higher likelihood than children without disabilities of not finishing high school. Consequently, it is imperative to guarantee that individuals with disabilities are equipped with literacy skills by enhancing their accessibility to fundamental reading and numeracy abilities (Groce, N.; Bakshi, P., 2011).

The Government of Rwanda has been concerned about children with learning disabilities. The 2007 Special Needs Education Policy and the 2018 Special Needs & Inclusive Education Strategic Plan 2018/19-2023/24 show the extent to which it caters for people with learning disabilities. Specifically, the Strategic Plan addresses exclusively educational needs of learners with SEN, through deliberately set policy goals and strategies. It also intends to achieve a basis for appropriate intervention in accordance with respective learners' needs, and in respect of the national and international norms and standards. It provides plans for improved access to curriculum by learners

with SEN, and strategies to enable them benefit from the available educational services, increase their literacy and numeracy rates, and complete the education cycles (MINEDUC, 2018).

Despite the numerous efforts by the Government of Rwanda to promote education for children with disabilities, their academic achievement is still poor and one of the predictable factors is poverty. This pushed the researcher to carry out investigation on the Effect of Poverty on Academic Achievement among Learners with Disabilities in Nkanka Sector of Rusizi District.

1.3 Problem statement

The Government of Rwanda's initiative to promote inclusive education is unquestionable. Such commitment to the education of learners with special educational needs is well highlighted in the MINEDUC Education Sector Strategic Plan Framework for Basic Education 2006-2010 but also the Constitution of the Republic of Rwanda article 40, which explains that *every person has the right to education ... The conditions for free primary education in schools will be subsidized by the Government and determined by an organic law ... The State has the duty to take special measures to facilitate the education of the disadvantaged* (Republic of Rwanda, 2015). This means that, it is the responsibility of the state to provide education for all its citizens.

For this group of students, comprehensive help is essential because without it, they run the risk of dropping out of school before finishing due to both internal and external problems that affect their capacity to learn, and they would then be vulnerable to social and economic exclusion. The Ministry of Education is dedicated to meeting the needs of all individuals who have historically been marginalized and disadvantaged in education and training in response to the national commitments made clear in the Education for All Plan 2003 and the UNESCO guidelines on inclusive education of 2005.

Nevertheless, as MINEDUC's (2018) educational planners observed, there are still challenges to meet the special needs' learners due to the fact that all schools in Rwanda are not yet Child-friendly and Disability-friendly. Furthermore, education for children with disabilities also demands strong coordination between different Ministries and agencies beyond the education sector, particularly those in the Health, Social Protection and Local Governance sectors, which itself contains the challenge of coordination across multiple sectors and Ministries.

In addition, learners with disabilities living in poverty continue to experience barriers that hinder their academic progress. These barriers may include limited access to specialized educational resources, inadequate support services, environmental stressors, and socioeconomic disparities in

educational opportunities. The compounding effects of poverty and disability exacerbate these challenges, further widening the achievement gap between students from low-income backgrounds with disabilities and their peers.

Understanding the nuanced relationship between poverty and academic achievement among learners with disabilities is crucial for developing targeted interventions and support strategies to address their unique needs. By elucidating the underlying mechanisms through which poverty impacts educational outcomes for this population, policymakers, educators, and stakeholders can implement evidence-based practices aimed at promoting educational equity and fostering inclusive learning environments.

It is against this background that the researcher decided to undertake a study on investigating Effect of Poverty on Academic Achievement among Learners with Disabilities in Nkanka Sector of Rusizi District.

1.4 Research objectives

1.4.1 General objective

The overall objective for the current study was to investigate the effect of poverty on academic achievement among learners with disabilities in Nkanka sector of Rusizi district.

1.4.2 Specific Objectives

The following research objectives guided the study:

1. Investigate the correlation between socio-economic indicators of poverty and academic performance among learners with disabilities within the Nkanka Sector of Rusizi District.
2. Assess the impact of poverty on the academic achievement among learners with disabilities in the Nkanka Sector of Rusizi District.
3. Suggest strategies and recommendations to improve academic achievement among low-income students with disabilities in the Nkanka Sector of Rusizi District.

1.4.3 Research questions

The following research questions guided the research thesis:

1. What are the socio-economic factors that influence the educational outcomes of learners with disabilities living in poverty in the Nkanka sector of Rusizi district?
2. In what ways does poverty, which is a part of socioeconomic status, affect the academic achievement of students with disabilities in the Nkanka sector of Rusizi District?
3. What strategies or interventions can be implemented to address the impact of poverty on the ic t among learners with disabilities in the Nkanka sector of Rusizi District?

.4.4 Research purpose

The purpose of this study is to investigate the effect of poverty on academic achievement among learners with disabilities in Nkanka sector of Rusizi district.

1.5 Significance of the study

The current study whose purpose is to investigate the effect of poverty on academic achievement of learners with disabilities in Nkanka sector of Rusizi district would be beneficial to the following people: top educational managers and planners, district and sector educational officers, head teachers, teachers, parents and researchers.

1.5.1 Ministry of Education /Rwanda Education Board (REB)

The study aims to offer accurate and pertinent data to educational leaders and planners within the Ministry of Education and the Rwanda Education Board (REB). The results may prove beneficial in enhancing the socio-economic circumstances of special needs education students within public secondary schools in Rwanda. These findings have the potential to encourage and streamline the implementation of professional development initiatives for teachers specializing in special education, with the goal of enhancing classroom instruction. Such interventions could bolster teachers' abilities to effectively support students with diverse learning needs.

1.5.2 District and sector education officers

The study findings could help educational officers at district and sector level to be aware of the problems facing learners with disabilities and to take appropriate solutions accordingly.

1.5.3 Head teachers and teachers

With the study, head teachers and teachers could get necessary information on the situation of special education learners and how to manage them.

1.5.4 Parents

With the same findings, parents and the entire community would become aware of the benefits of educating special needs learners.

1.5.5 Researchers/Scholars/Academicians

The results from the study will help researchers, scholars, academicians and ordinary readers to deepen their knowledge on the effect of poverty on academic achievement among learners with disabilities.

1.6 Delimitation of the study

The study consisted in three dimensions of the scope: content scope, geographical scope and timescope.

1.6.1 Content scope

The study was limited on investigating effect of poverty on academic achievement of learners with disabilities in the mainstream schools specifically in Nkanka sector of Rusizi. The study did not entail learners in special schools.

1.6.2 Geographical scope

The research was carried out in Rusizi district, Nkanka sector. The sector is one of 18 sectors from Rusizi district. Nkanka has a population estimated at 19.857 inhabitants with 20.43 km² (National Institute of Statistics of Rwanda, 2022). To the West of Nkanka there is Nkombo sector, to the East there is Giheke sector and to the North there is Nkombo while to the South there is Gihundwe and Giheke sectors.

8.3 Time scope

The study covered data spread over the period of two academic years 2021/2022 and 2022/2023. The period corresponds to the publication of the Revised Special Needs Education Policy (MINEDUC, 2018).

1.7 Limitation of the study

While conducting the study, the researcher encountered the following constraints. There were respondents who were not cooperative and delayed answering the questionnaire. There were parents whose children were not enrolled in schools, which deemed not easy to collect information from them. Eventually the research findings were limited to the answers given by the respondents. Another constraint is about time. The time was not enough in comparison with research activities

Finally, the research was limited in terms of financial resource while moving from one place to another for data collection. The transport was also not easy due to the rainy season.

HAPTER TWO: REVIEW OF THE LITERATURE

2.0 Introduction

This chapter presents a review of literature already carried out in the field under study and defines key concepts related to the study. It also deals with the theoretical orientation and the empirical literature. Finally, the chapter discusses conceptualization.

2.1 Definition of key concepts

Poverty is the lack of basic human needs, such as clean water, nutrition, health care, education, shelter, transportation, life expectancy, education, provision of public goods, etc. Poverty is not only a deprivation of income but also an insufficient coverage of various human needs (Streeten, 1981).

Academic achievement: This is the quantity of knowledge acquired through classroom instruction. It is the degree of success or level of attainment by the student in the curricular or academic subjects specified within the syllabus (Sangtam, 2014).

Disability: This is the loss of an organ or body part, either completely or partially, in terms of use or ability. As a result, that organ or body component loses or has less function. Because different societies interpret limitations or abilities in line with their social norms and standards, this is also a social issue. Multiple disabilities, intellectual disabilities, physical disabilities, hearing disabilities, visual disabilities, and communication disabilities are all mentioned in this document (REB, 2018).

Inclusive Education: This is the process of addressing all learners' educational needs in a mainstream education setting. It is based on the principle that all learners are different but they can learn and develop differently. Therefore, the education system is expected to be flexible and adapted to cater for every learner's needs (REB, 2018).

Special Needs: Special needs are any of various difficulties (such as a physical, emotional, behavioral, or learning disability or impairment) that cause an individual to require additional or specialized services or reasonable accommodations (in education or recreation). All those difficulties or challenges that a person faces and render him/her different from other average persons are referred to as "special needs" because they may demand adjustments in order to participate or access services equally (REB, 2018).

Special Educational Needs (SEN): These are non-ordinary needs a learner may have in schooling as a result of intrinsic or extrinsic limitations/barriers. The learner with SEN will need extra attention / assistance from the teacher and/or the use of different educational approaches or/and tools. Special needs that have a bearing on school work and education are generally referred to as special educational needs

(REB, 2018).

Special Needs Education (SNE): education for those with disabilities, typically intellectual, multiple disabilities, or sensory disabilities. Adapting the educational system (Teaching approaches, environment, programs, tools) and adjusting them to fit the individual needs of learners with special educational needs is what is referred to as Special Needs Education.

Special School: A school that is set and organized to provide educational services to learners with specific Special Educational Needs. In Rwanda, there are schools specified for learners with hearing difficulties, with visual difficulties or for those with cognitive challenges, etc. (REB, 2018).

2.2 Theoretical framework

Two theories underpin the study namely: The basic Needs Theory by Abraham Maslow and he Vygotsky's Social Constructivism Theory of Learning.

2.2.1 The basic Needs Theory by Abraham Maslow

According to Maslow (1943), people are motivated to satisfy their needs and those needs can be classified into the following five categories that are in an ascending hierarchy: *Physiological needs, security needs, social needs, esteem and self-actualization needs*. These are necessities for survival and serve as the cornerstone for all other needs. An inability to eat, dress, or maintain excellent health prevents a learner from attending class and focusing on the material being taught.

To be able to relate to teachers and other students in a positive way, the learner needs to feel comfortable and secure both at home and at school. To feel loved, the learner must nurture this sense of community. If the two lower requirements are not sufficiently satisfied, this could become warped and make it difficult for the learner to go to the next level of the hierarchy (Hayes, 2002). The theory was deemed appropriate for this study because its principles can enhance the creation of a learner friendly school (CFS). According to UNICEF (2003) the characteristic of CFS is one in which the learning environment is conducive, teachers are friendly to the children, where the safety of children is adequately met and where the rights of all children are recognized irrespective of gender, family status, physical and mental abilities/disabilities and religious/ethnic differences.

2.2.2 Vygotsky's Social Constructivism Theory of Learning

According to Vygotsky (1978), when a child (or any novice) is learning a new skill or solving a new problem, it can perform better if accompanied and helped by an expert than if performing alone— though still not as well as the expert. Someone who has played very little chess, for example, will probably compete against an opponent better if helped by an expert chess player than if competing alone against an opponent. Vygotsky called the difference between solo performance and assisted performance the

zone of proximal development meaning the place or area (figuratively speaking) of immediate change. From this perspective learning is like assisted performance. Initially during learning, knowledge or skill is found mostly “in” the expert helper. If the expert is skilled and motivated to help, then the expert arranges experiences that allow the novice to practice crucial skills or to construct new knowledge. In this regard the expert is a bit like the coach of an athlete offering support and suggesting ways of practicing, but never doing the actual athletic work himself or herself.

Grobecker (1999) adds that learning should be meaningful and connected to real-life situations. Students with learning disabilities may find this approach beneficial due to their difficulty in applying knowledge learned in the classroom to other contexts. By incorporating realistic examples into instruction, students can practice applying their knowledge to different situations. Teachers who adopt a constructivist perspective base their teaching on the existing knowledge of students (Duhaney & Duhaney, 2000). Therefore, when introducing new concepts, teachers should first discuss related ideas that students are already familiar with. This method can be particularly helpful for students with learning disabilities, as it can boost their confidence and reduce feelings of frustration during the learning process. Another fundamental principle of the constructivist approach is the emphasis on key concepts and their connections within and across subject areas (Grobecker, 1999; Ellis, 1997). By highlighting the relationships between important ideas, teachers can help students focus on understanding the core concepts of a subject rather than memorizing isolated pieces of information. It is crucial for teachers to prioritize teaching essential facts related to key concepts, especially for students with learning disabilities who may struggle with memory deficits. Active learning plays a vital role in a constructivist approach to instruction. When students are actively engaged in the learning process, they are more likely to comprehend and retain the information presented (Duhaney & Duhaney, 2000; Harris & Graham, 1996). Many teaching methods, such as inquiry-based approaches in science and whole language strategies in language arts, encourage student participation. Teaching students the skills like summarizing, paraphrasing, predicting, and using visual aids, all of which involve active learning, can enhance understanding and retention of concepts for students with learning disabilities. Activities like role-playing, art projects, and groupwork can also be effective in reinforcing learning (Ellis, 1997) and motivating students with LD, who may have a tendency to be more passive learners due to past experiences of failure (Lerner, 2003).

Many believe that high level thinking skills, such as problem solving and analysis, are too complex for learners with learning disabilities, despite being an important aspect of a constructivist curriculum. However, with adequate support and preparation, it is possible and even beneficial to focus on developing these skills with learners who have LD (Ellis, 1997; Grobecker, 1999).

Educators can assist learners with LD in participating in challenging writing assignments, research tasks, and other academic activities.

2.3 Empirical literature

2.3.1 The concepts of poverty, disability and academic achievement

a. Poverty concept

Poverty has traditionally been assessed by economists based on lack of income or low levels of consumption. Welfare economists and social policy makers (ILO, 1995; Ringen, 1988; World Bank, 1990) define the poor as individuals whose income falls below a certain subsistence level, also known as the poverty line. However, these methods do not account for the distinction between income and livelihood in a society that operates without cash. Amartya Sen has criticized two common poverty measures, the head count ratio and the income gap ratio, for not considering income distribution among the poor or changes in total poverty resulting from a deterioration in the circumstances of those already impoverished. Other scholars argue that poverty cannot be accurately captured by a single measure of well-being, but should take into account additional factors such as food security, housing, life expectancy, education, and access to public resources (Atkinson & Bourguignon, 1982; Kolm, 1977; Maasoumi, 1986; Tsui, 1995).

There is an increasing focus on 'multidimensional' poverty, where poverty is not just about lacking income but also not having sufficient access to basic human needs (Streeten, 1981). The idea of multidimensional poverty leads to additional queries: do individuals who lack in any dimension qualify as poor? Or does a person need to be deprived in all aspects to be considered poor? A minimum number of dimensions of deprivation must be defined to identify those experiencing multidimensional poverty and to assist in targeting public policies.

Impact of poverty on child health

Lack of resources can lead to severe health issues, which could ultimately lead to death. Families living in poverty often struggle to adequately care for their infants, resulting in higher mortality rates among infants from impoverished households. Poverty is associated with a rise in the hospitalization of children, consequently leading to higher rates of school absenteeism (Engle & Black, 2018). Impoverished children experience more complicated health problems due to limited access to early intervention, increasing their susceptibility to injuries and illnesses.

Childhood Poverty and Brain Development

Growing up in a low-income household has been found to have an impact on a child's brain development

similar to that of individuals who have experienced abuse. Dike (2017) found out that children who have been abused often display higher levels of stress, however, children from impoverished backgrounds may also experience high levels of stress that are persistent. In addition, children raised in poverty are often exposed to various social issues that can trigger the release of stress hormones. For example, Engle and Black (2008) argue that poverty is often linked with neglect, malnutrition, and violence during childhood. The early years of childhood are crucial for the development of gray matter in the parietal and frontal lobes of the brain. This serves as the control centre and is responsible for managing cognitive functions such as problem-solving, planning, controlling instincts, and focusing.

Research reveals that children living in poverty have significantly reduced amounts of grey matter, which massively impedes their learning capacities even before joining kindergarten. Secondly, the brains of children living in poverty show a substantial deterioration of cognitive capabilities associated with memory, language, and reading. This impact is, however, related to other factors such as neglect and family stress (Engle & Black, 2008). Besides, research establishes that children living in poverty-stricken families have brains with a surface area that is six percent less than those from wealthy families. Developing brains that are exposed to poverty are revealed to have reduced ridges on the floor of each lateral ventricle of the brain because of less caregiving from the parent (Dike, 2017). Research has shown that children living in poverty are usually malnourished, and therefore, their brains lack the essential nutrients and minerals responsible for their development.

b. The concept of disability

The definitions of disability and poverty are intricate and intricate. Disability is delineated in varying ways depending on the perspective being examined. The medical outlook on disability is heavily normative, focusing on the individual and their medical state, categorizing individuals as disabled if they are incapable or less capable of functioning as a typical individual ((Mitra, 2006).

On the contrary, the social model of disability argues that individuals are considered 'disabled' when the structural components of physical, cultural, political, and economic systems in their society fail to accommodate their impairments (Oliver, 1996; Shakespeare, 2001). This approach also examines issues related to marginalization, exclusion, oppression, and discrimination, with the aim of challenging and eliminating the barriers that create disability, as defined by dominant social and cultural norms. The emergence of the social model, which gained prominence in the 1980s under the leadership of the global Disability Rights Movement, has laid the foundation for a framework known as the 'human rights model.'

The new United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) is based on

a human rights model with social model principles, emphasizing the equitable inclusion of individuals with disabilities in global health and international development initiatives. The UNCRPD does not provide a specific definition of disability, but recognizes it as a concept that evolves over time. According to Article 1 of the UNCRPD, individuals with disabilities are those who face long-term physical, mental, intellectual, or sensory impairments that, combined with societal barriers, may impede their full participation in society on an equal level with others.

The World Health Organization [WHO] (2001) has formulated the International Classification of Functioning, Disability and Health (ICF) as a comprehensive framework that combines elements from both the medical and social models. This classification system has gained widespread adoption among researchers and policymakers in the global development field for addressing disability-related issues. Within the ICF framework, disability is defined as a broad concept that includes impairments, activity limitations, and participation restrictions. An impairment refers to a restriction in both physical and cognitive functioning.

Activity limitations are difficulties in executing tasks, while participation restrictions are difficulties in relation to the environment. Disability is a complex interaction between a person's body and society. The ICF framework allows for environmental changes to reduce functional disability. Minor adaptations like curb cuts or ramps can have significant impacts on health and socio-economic status. Sen's (1992) capability approach focuses on individuals' ability to pursue well-being, rather than labeling them as disabled or not. It considers the impact of disability on the family and community. The approach emphasizes the person's agency in making decisions valued by them.

c. The concept of academic achievement/performance

Various authors have offered different interpretations of performance. Mortimore (2002) defined performance as the achievement that occurs under examination conditions, while De Jager (2002) described it as the change that occurs following training or a planned experience, particularly in relation to an individual's behavior, knowledge, or skills. De Jager also emphasized that performance is closely tied to a student's achievements and success in their academic pursuits.

Okemwa (2000) connected student performance to effectiveness, defining it as the individual's ability to be productive after formal education or planned experiences. This effectiveness is manifested through the individual's behavior, knowledge, or skills. These definitions portray performance as the observable outcome of training. One significant aspect for choosing this measure is that course grades indicate the fulfillment of specific academic standards outlined in course syllabi and understood by all enrolled students (Mortimore, 2002). These standards encompass various assessments such as exams and

lab reports, making course grades a summative evaluation of student performance (De Jager, 2002).

Academic performance is often defined as a student's academic standing at a particular moment. This standing is typically determined by the grades received in a course or group of courses (Daniels and Schouten, 1970). Simkins (1981) addressed this academic standing, stating that performance is a measure of output, with education's main outputs being changes in knowledge, skills, and attitudes resulting from school experiences.

Al-Shorayye (1995) highlighted that a student's performance in exams is influenced by their cumulative grade point average, echoing Entwistle and Wilson's (1977) argument that examination performance is typically used to judge a student's success. They also emphasized that the best measure of performance is the overall academic performance across all subjects taken by the student.

Researchers have extensively debated performance as a gauge of educational output (Blaug and Woodhall, 1968; Adeyemi, 1998; Bandele, 2001). Blaug and Woodhall (1968) contended that the performance of school leavers can be accurately assessed through their success in national examinations. They quantified output based on the number of graduates weighted by quality indices or the number of passes, asserting that performance in national exams is a pertinent indicator of educational quality and that the 'academic index' quantifies output in terms of national exam results. Academic achievement pertains to an individual's educational performance and signifies the level to which specific goals set within instructional settings have been attained. It encompasses a range of skills and competencies, thus should be viewed as a multidimensional construct that incorporates various areas of learning. When defining academic achievement, it is necessary to consider the metrics utilized for its assessment. Regardless of the measure employed to gauge academic achievement, factors such as general intelligence, motivation for achievement, recognition, interest, attitude, aptitude, and personality traits play a role in influencing outcomes. Consequently, an individual's inclination towards academic accomplishment is contingent upon a variety of factors.

2.3.2 Socio-economic factors and learners' academic achievement

Over the course of several decades, academic achievement has been linked to economic success and societal accomplishment. Academic achievement, however, in the United States is not equally distributed. Children raised in conditions where higher incomes are prevalent in the family outperform children raised by parents living in poverty (Herman-Smith, 2013). It was discovered that Parents in poverty may not be mentally prepared to have a good relationship with their children (Duncan, 2013). Poverty can bring forth parental depression which negatively impacts children (Duncan, 2013). Low

income parents are atypically very authoritative and less likely to provide their children with important learning skills or activities (Duncan, 2013).

Similarly, families play a crucial role in shaping children's learning behaviors and academic success, as they serve as the primary and most influential environments for children. According to Coleman's report (1966), families may have a more substantial impact on students' academic achievements than schools and communities. Numerous empirical studies on family background and children's achievements have indicated that the socioeconomic status of families can have a more significant effect on academic performance than schools, as suggested by Coleman and others. The hypothesis proposed by Coleman has been substantiated by research in various Chinese provinces and cities, such as the study by Fang and Feng (2008) in Nanjing, which highlighted the significant influence of family socioeconomic status on children's academic outcomes. Similarly, Sun et al. (2009) found a positive correlation between parental income and education levels and the academic success of primary school students in Gansu province.

Research has delved into the mechanisms through which families impact children's academic achievements, drawing from theories such as human capital, cultural capital, and social capital theory. The human capital theory asserts that education is a crucial investment, with families basing their decisions on educational investments on a "cost-benefit" framework, leading to variations in children's academic outcomes based on family investments. Limited resources among poorer families often hinder their ability to adequately invest in their children's education, consequently affecting academic performance. Gross (1993) demonstrated that students' cognitive abilities are positively linked to their parents' socioeconomic status.

The cultural capital theory underscores how family cultural resources and environment determine children's educational aspirations and performance. Parents with abundant cultural capital tend to have a better understanding of school norms, allocate more cultural resources, nurture their children's educational aspirations and interests, provide academic assistance, and enable exceptional academic performance. Sewell and Hauser (1968) highlighted the significant impact of parental educational expectations on junior students' academic achievements. Social capital theory accentuates the importance of parental involvement in education and its influence on children's learning behaviors and achievements; parents with higher socioeconomic status typically engage more actively in their children's learning activities, communicate more frequently with teachers, manage school attendance and other risky behaviors, ultimately enhancing their children's academic performance.

learning behaviors and achievements; parents with higher socioeconomic status typically engage more actively in their children's learning activities, communicate more frequently with teachers, manage school attendance and other risky behaviors, ultimately enhancing their children's academic

performance.

Special needs learner's socio-economic family background and academic achievement

As it has been discussed in the previous section, low family income is associated with poor academic achievement among children from lower socio-economic family background. As it was discovered, adolescents from impoverished backgrounds are confronted with a multitude of challenges within their families such as dropping out of school, subpar academic achievements, substance abuse, early pregnancies, joblessness, inadequate nourishment, and lack of shelter (Johnson, 1991). These vulnerabilities tend to increase in young individuals the longer they are immersed in such circumstances, perpetuating the cycle of poverty (Johnson, 1991). Offspring of impoverished families frequently exit the educational system ill-equipped for adulthood (Knapp, 1990).

Furthermore, attendance issues in educational institutions must not be disregarded. Children who exhibit frequent absences in kindergarten tend to show decreased academic achievement in the subsequent year, as highlighted by research conducted by Balfanz and Byrnes in 2012. In addition, students living in poverty may be at a disadvantage at school. A number of students living in poverty do not have parents who will read aloud to them, and the result is students with smaller vocabularies as well as limited language (Rothstein, 2008). Low income parents are atypically very authoritative and less likely to provide their children with important learning skills or activities (Duncan, 2013).

2.3.3 The relationship between poverty and academic achievement among learners with disabilities

As per Rothstein (2008), students from impoverished backgrounds experience various medical conditions that contribute to high rates of absenteeism, resulting in lower academic performance for both students and schools. For instance, many economically disadvantaged students lack access to and financial means for health insurance (Rothstein, 2008). Consequently, these students often grapple with health issues like asthma, leading to disrupted sleep patterns, heightened irritability, and a lack of physical activity (Rothstein, 2008). Moreover, children living in poverty frequently contend with anemia, which can impact cognitive functioning at school and manifest in increased behavioral challenges (Rothstein, 2008).

Students from low-income backgrounds may face educational challenges. A significant proportion of these students may lack parental involvement, such as reading aloud to them, leading to limited vocabulary and language skills (Rothstein, 2008). Additionally, these students often reside in neighborhoods with high crime and drug use rates (Rothstein, 2008), resulting in less supervision and

care. Consequently, students living in poverty may struggle to find positive rolemodels (Rothstein, 2008).

In the past few decades, there has been a correlation established between academic success and economic prosperity and societal achievements (Herman-Smith, 2013). Despite this connection, academic achievements in the United States show uneven distribution (Herman-Smith, 2013). Children who grow up in affluent families tend to outperform their peers raised in poverty-stricken environments (Herman-Smith, 2013).

With regards to academic achievement of learners with disabilities, it was noted that during the 2015-2016 academic year in the United States, approximately 746,765 children with disabilities aged 3 to 5 and 5,936,518 students with disabilities aged 6 to 21 were enrolled in educational programs governed by the Individuals with Disabilities Education Improvement Act (IDEA 2004), representing 6.2% and 8.9% of the student population, respectively (U.S. Department of Education, 2017). These students often exhibit underperformance in academics and disruptive behaviors in the classroom, which are criteria outlined by IDEA that impede their educational progress (Nelson et al., 2004; Walker et al., 1995; Walker & Severson, 2002). According to the National Assessment of Educational Progress (NAEP, 2017), students with disabilities displayed lower proficiency in reading compared to their non-disabled peers, with percentages ranging from 10.0% to 12.0% in 4th graders, 10.0% in 8th graders, and 10.0% to 33.0% in 12th graders. Similarly, in mathematics, students with disabilities scored lower than their counterparts without disabilities, with percentages ranging from 5.0% to 16.0% in 4th graders, 9.0 to 38.0% in 8th graders, and 5.0% to 23.0% in 12th graders. The NAEP assessments utilize a scale score ranging from 0 to 500, revealing a substantial academic achievement gap between students with disabilities and those without disabilities.

The educational outcomes of individuals with disabilities, such as lower levels of education, have been found to be linked to unfavorable post-school and employment outcomes. Various studies (Lim et al., 2013; Loprest & Maag, 2007; Sung et al., 2014) have highlighted this correlation. Sanford et al. (2011) have highlighted significant results from the National Longitudinal Transition Study-2 (NLTS-2), indicating that young adults with disabilities are less likely to pursue post-secondary education after leaving high school compared to their non-disabled peers of the same age (54.9% vs. 62.1%). Additionally, young adults with disabilities who do not complete high school are less likely to secure employment compared to those with disabilities who graduate from high school (52% vs. 73%). These findings emphasize the importance of addressing the learning needs of students with disabilities.

The condition of poverty places students at a higher risk of developing disabilities, resulting in a dual disadvantage for these learners and contributing to wider academic inequalities. When compared to students with disabilities who do not reside in high-poverty areas, those living in such contexts are more susceptible to failing in school due to the negative impact of poverty on their educational achievements. Research conducted by Stanford and colleagues (2011) highlighted data from the NLTS-2, revealing that young adults with disabilities from lower-income households (earning \$25,000 or less) were less likely to pursue post-secondary education or secure employment compared to their counterparts from higher-income families (earning more than \$50,000). Specifically, the statistics showed lower enrollment rates in 2-year or community colleges (43.0% vs. 68.0%), 4-year colleges (24.0% vs. 49.0%), and fewer individuals engaged in paid employment (8.0% vs. 22.0% and 58.0% vs. 79.0%, respectively). These findings underscore the pressing need for enhanced support for students with disabilities living in impoverished circumstances through evidence-based practices (EBPs).

To deepen our comprehension of academic outcomes in schools attended by students residing in high-poverty environments, including those with disabilities or at risk of developing disabilities, researchers have conducted thorough literature reviews. Khattri et al. (1997) examined studies on the influence of poverty on the academic performance of at-risk students in impoverished rural and urban areas. Their findings revealed that academic achievement among impoverished rural students is relatively modest, albeit higher than that of their urban counterparts, with less significant academic performance deficits observed in rural settings compared to urban environments. Qi and Kaiser (2003) provided a comprehensive overview of research on behavioral issues exhibited by young children, including those with disabilities, in socioeconomically disadvantaged settings. Their analysis indicated that students from low socioeconomic backgrounds demonstrate higher rates of behavioral problems when compared to the general population, which are correlated with various risk factors that impede their educational progress, such as child and parental characteristics, parenting styles, and sociodemographic influences.

Murry et al. (2011) synthesized studies that explored the relationship between poverty levels in neighborhoods and academic achievement among adolescents. Their findings highlighted a direct association between neighborhood poverty and academic performance among adolescents, specifically noting a correlation between low scores in reading and math assessments and elevated dropout rates.

2.3.4 Strategies to improve academic achievement in low-income students with disabilities

Considering the abovementioned factors which affect learners' academic achievement as discussed in the section 2.3.2, there is need to also discuss the strategies to improve academic performance among those low-income learners with disabilities. The strategies can be divided into classroom support and psychosocial support.

Inclusion

One effective classroom strategy that is frequently utilized is inclusion, where both special needs students and non-disabled students receive education in the same setting. According to Hyde et al. (2014), inclusion

emphasizes the right to full participation and fairness through involvement in all aspects of a student's daily life. It ensures that both social and academic components are addressed, as noted by Lamport, Graves, and Ward (2012). Through inclusion, students with disabilities, those from disadvantaged backgrounds, and those from more affluent backgrounds are all taught together in a single classroom, addressing their social needs and providing them with equal opportunities for success. Teachers accommodate all students in the class by employing diverse teaching strategies that cater to the various levels and dimensions of diversity present. They pay close attention to the individual learning pace, depth, and speed of each student and make adjustments as necessary. Inclusion is vital in keeping students engaged, particularly in ensuring that special needs students are actively involved in classroom activities alongside their peers, as emphasized by Foreman (2011). Active participation is a key factor in achieving academic success.

Cooperative learning and Peer tutoring

Cooperative learning, also known as peer learning, can be utilized to support disadvantaged special needs students by encouraging social interaction and hands-on experiences, allowing students to share knowledge with one another (Lamport, Graves, and Ward, 2012). In this approach, students are grouped into diverse teams of four to six members; students with varying learning abilities and access to resources are mixed together in discussion groups. Through sharing materials, knowledge, and responsibilities, students from different economic backgrounds can benefit equally. Cooperative learning not only enhances the academic performance of disadvantaged special needs students but also fosters acceptance among their peers.

A study utilizing a cooperative Integrated Reading and Composition model demonstrated that students participating in cooperative learning showed improvements in reading comprehension and vocabulary (Slavin, Stevens, and Madden, 1988). Research on the social outcomes of cooperative learning for special needs students has revealed a notable increase in friendships formed within teams regardless of economic diversity. Generally, special needs students thrive better in cooperative educational settings compared to traditional schools, with a 30% greater likelihood of being chosen as friends by their peers (Slavin and Stevens, 1991). Peer learning or teaching involves students collaborating in teams where one student acts as a tutor for the others. Meta-analyses have indicated that peer learning results in improved academic achievements for both the tutor and the tutee, while also enhancing friendships among team members (Cook, Scruggs, Mastropieri, and Casto, 1986). Overall, both cooperative learning and peer tutoring strategies have been shown to enhance academic performance and social-emotional strength among disadvantaged and special needs students, enabling them to compete on an equal footing with their peers.

Co-teaching

One of the most effective ways to help improve the academic performance of special needs students is

through co-teaching. Co-teaching takes place in regular classrooms where students with special needs are included along with their peers. This approach is different from the traditional method where students with disabilities were removed from the classroom for instruction in order to meet specific goals (Paulsen, 2008). Co-teaching involves multiple teachers working together to teach students, as a strategy aimed at creating an inclusive learning environment (Aliakbari and Nejad, 2013). In simple terms, co-teaching is when teachers collaborate to utilize their teaching methods, knowledge, and assessment techniques. In the context of special education, co-teaching specifically involves a partnership between a general education teacher and a special education teacher to provide instruction to a diverse group of students, including those with special needs, in a way that is adaptable to their learning requirements (Friend, 2008). Successful implementation of co-teaching relies on the participation of three key professionals: the general educator, the special educator, and the administrator (Friend and Bursuck, 2009).

The primary focus of the general teacher lies in delivering curriculum content, while the specialist is dedicated to addressing the unique needs of students through specialized strategies, and the administrator ensures the provision of necessary resources to facilitate effective co-teaching (Fennick, 2001).

In a separate quantitative study conducted by Pugach and Wesson (1995) involving 18 fifth-grade students, it was discovered that students with special needs preferred being in co-taught classes over specialized classes. This preference resulted in a positive outlook on school and increased motivation to attend. Co-teaching fosters the establishment of learning communities within the classroom, creating a safe and supportive environment where students embrace physical and economic differences through the formation of meaningful relationships (Dieker, 2001; Austin, 2001).

These relationships help mitigate the effects of disability and economic background, allowing students to interact on an equal social platform. In addition to enhancing their academic skills, co-teaching also boosts students' self-worth, including self-esteem and self-confidence (Hang and Rabren, 2009). It is worth noting that students with special needs from low-income families often experience lower levels of self-esteem and confidence.

Material and psychological support

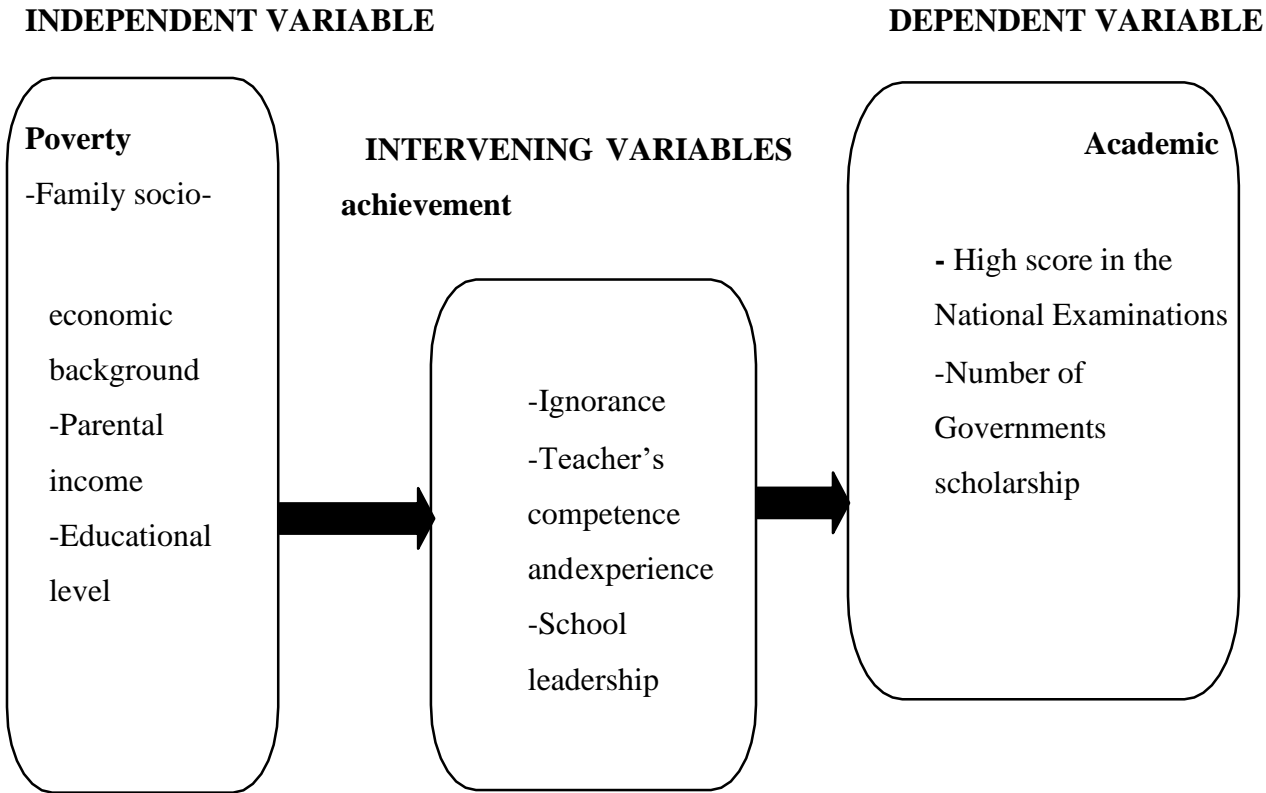
Students from underprivileged backgrounds face barriers to learning that may not be encountered by their more advantaged peers, regardless of any disabilities they may have. It is crucial for schools to take an active role in supporting these special needs students, both within the classroom and beyond, to enhance their academic success. By securing adequate funding, schools can implement specialized programs that mirror the extracurricular learning opportunities often available to wealthier students (Hirsch, 2007). In addition to their disabilities, these students may also lack access to the resources and materials necessary to keep up with their classmates. Therefore, providing learning support materials as incentives for academic improvement can help motivate them to excel.

Armstrong (2010) emphasized the correlation between inadequate nutrition and its detrimental effects on academic performance. Consequently, it is imperative for educational institutions to prioritize providing students with access to healthy dietary options to enhance their scholastic achievements.

Creating a supportive environment through various forms of encouragement from teachers, peers, and the school community can foster a sense of belonging and enjoyment in the educational experience, ultimately leading to improved performance. Furthermore, it is essential for schools to engage with and build strong relationships with the parents of these students, particularly in underserved communities where parental involvement may be lacking, to emphasize the significance of home support in the academic success of their children.

2.4 Conceptual framework

The current study's conceptual framework posits that poverty, as an independent variable, has an impact on the academic performance of students with disabilities, serving as the dependent variable. The diagram in Figure 1 depicts the interconnections between variables.



In Figure 1, it is evident that poverty is composed of various sub-variables such as family socio-economic status, parental income and parent/guardian educational level which have a significant impact on the academic success of students with disabilities. Academic achievement sub-variables include excelling in National Examinations and obtaining Government scholarships at public higher learning educational institutions. Additionally, there exist other factors that may influence the academic performance of students with disabilities, known as intervening variables, which encompass issues such as ignorance, teacher's qualification and experience, school leadership, etc.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the research design, population, sample size, the techniques of data collection, validity and reliability of instruments, research procedure, data processing and analysis and lastly data presentation.

3.1 Research Design

A research design, in its broader interpretation, encompasses the strategic blueprint and schedule for a study, involving the creation of an empirical examination to either support or challenge a specific assertion (Borg & Gall, 1989). It acts as a comprehensive framework that outlines the methodological approach for carrying out a research study, which includes the operationalization of variables for measurement, the identification of a specified sample for analysis, data collection for hypothesis testing, and the analysis of results (Nconco, 2006).

The study employed a descriptive correlational research design, utilizing both quantitative and qualitative methodologies to gather relevant information through random and purposive sampling techniques. Both qualitative and quantitative research methods were utilized to investigate the effect of poverty on the academic performance among learners with disabilities in the Nkanka Sector of Rusizi District.

3.2 Study population

As outlined by Cooper (1996), a population or universe within a research context pertains to a collective of individuals or establishments who share specific characteristics of interest to the researcher. Opie (2007) defines the target population as the entirety of subjects that a researcher is concentrating on. The particular population under examination in this research included all secondary school head teachers, teachers, students, and parents and guardians in the Nkanka Sector of the Rusizi District. The Nkanka sector is home to three secondary schools, namely College de Nkanka, GS Nkanka and GS Cyibumba. There are 66 secondary school teachers, 1775 students and 1775 parents/guardians in the Nkanka Sector from Rusizi District. The table 1 shows the study population statistics.

Table 1: Study population statistics

School name	Number of teachers		Number of students		Number of parents/Guardians		Head teachers	Total
	Male	Female	Male	Female	Male	Female		
College de Nkanka	16	7	180	234	262	152	1	852
GS Nkanka	14	8	489	360	336	513	1	1721
GS Cyibumba	16	5	221	291	241	271	1	1046
Total	46	20	890	885	839	936	3	3619

Source: Computed from Nkanka Sector Educational Statistics (2024)

3.3 Sampling design

3.3.1 Sample Size

Since all individuals could not be accessed at the study period due to financial and time constraints, the target population were teachers, students, parents and/or guardians from College de Nkanka, GS Nkanka and GS Cyibumba. The total number of respondents to be selected was 98 because, as Yamane (1967) explains, if the population is between 3000 and 4000 people, with 10% as the margin of error, the sample size has to be 98. The table 2 below covers the sample size population statistical data.

Table 2: Yamane’s sampling method

Size of Population	Sample Size (n) for Precision (e) of:			
	±3%	±5%	±7%	±10 %
500	a	222	145	83
600	a	240	152	86
700	a	255	158	88
800	a	267	163	89
900	a	277	166	90
1,000	a	286	169	91
2,000	714	333	185	95
3,000	811	353	191	97
4,000	870	364	194	98
5,000	909	370	196	98
6,000	938	375	197	98
7,000	959	378	198	99
8,000	976	381	199	99
9,000	989	383	200	99
10,000	1,000	385	200	99
15,000	1,034	390	201	99
20,000	1,053	392	204	100
25,000	1,064	394	204	100
50,000	1,087	397	204	100
100,000	1,099	398	204	100
>100,00 0	1,111	400	204	100

a = Assumption of normal population is poor (Yamane, 1967). The entire population should be sampled.

Basing on Yamane’s published table, we can summarize the sample size statistical data in the following table 3.

Table 3: Sampling Distribution

Participants School name	Teachers		Students		Parents		Head teachers	Total IN	Total sampl e
	N	Sampl e	N	Sampl e	N	Sampl e	N and n		
College de Nkanka	23	8	414	10	414	10	1	852	29
GS Cyibumba	21	8	512	11	512	11	1	1046	31
GS Nkanka	22	10	849	14	849	14	1	1721	38
TOTAL	66	26	1775	35	1775	35	3	3619	98

Source: Primary data (2024)

3.3.2 Sampling Techniques

Sampling can be defined as the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen (Trachoma, 2006). It is the process of selecting the subjects or cases to be included in the study as representative of the target population. In addition, sampling techniques refer to the procedure a researcher uses to select the needed study sample. (Kombo& Tromp, 2006).

Thus, the study employed simple random sampling technique, purposive sampling and stratified sampling technique to select respondents who helped her to investigate Effect of Poverty on Academic Achievement among Learners with Disabilities in Nkanka Sector of the Rusizi District.

3.3.2.1 Purposive Sampling

According to Punch (2006), purposive sampling affords the researcher the opportunity to employ his or her discretion in the selection of participants. Purposive sampling is widely acknowledged in academic literature as the prominent non-probabilistic sampling technique utilized to identify key participants. The process of sample selection typically derives from the research objectives or significant features under consideration (Oso and Onen, 2005). The current thesis employed purposive sampling as the method for selecting head teachers to be interviewed.

3.3.2.2 Simple random sampling

Simple random sampling means a sampling technique which is used in a situation where each respondent has an equal chance of being selected to participate in the study (Mugenda and Mugenda, 1999). This ensures that each member of the target population had an equal and independent chance of being included in the sample. Thus, simple random sampling was used to select teachers to respond to the questionnaire.

3.3.2.3 Stratified sampling method

Stratified sampling is a method of probability sampling that involves dividing a population into distinct homogeneous groups with similar characteristics. This approach is particularly useful in cases where the population is heterogeneous, as it increases the chances of obtaining a representative sample (Parahoo, 2006). Stratified sampling can also be employed to create homogeneous groups for experimental research, grouping individuals based on demographic or other relevant factors.

The sampling frame in stratified sampling is organized into different strata, each representing a distinct sub-population (Singh, 2007). When the distribution of the strata is uneven, it is important to allocate samples proportionately to ensure fair representation across all groups. Strata can be defined by various factors such as sex, age, religion, or geographical location (Singh, 2007).

Researchers must first identify and list the population before conducting stratified sampling. It is crucial to divide the population into strata based on specific criteria and then randomly select a predetermined number of individuals from each group using a simple random sampling method. As noted by Polit and Beck (2010), researchers may choose to sample proportionately or disproportionately. In proportionate stratified sampling, each stratum has an equal sampling fraction, whereas in disproportionate stratified sampling, different strata may have unequal numbers of subjects sampled (Singh, 2007).

The stratified sampling technique was employed to choose 25 students without disabilities and 10 students with disabilities, as well as their respective parents or guardians.

3.4 Data Collection instruments

The study called for the use of both types of data: primary and secondary data. Primary data were collected by using questionnaires and semi-structured interviews while secondary data were accessed by treating school archives and sector and district statistical data.

3.4.1 Questionnaires

As mentioned above, questionnaires were distributed to teachers and students. The questionnaire was used because as Kiess and Bloomquist (1985) observed, it offers considerable advantages in the administration. It presents an even stimulus potentiality to a large number of people simultaneously and provide the investigation with an easy accumulation of data. Gay (1992) maintained that questionnaires give respondents freedom to express their views or opinions and also to make suggestions.

3.4.2 Interviews

Kiess and Bloomquist (1985) argue that utilizing an interview schedule is an appropriate approach for data collection when working with small sample sizes. This is attributed to the researcher's ability to extract a more comprehensive range of information from participants compared to using a questionnaire.

The decision to conduct interviews is often supported by the hectic schedules of managers and leaders. Providing them with a questionnaire may result in them forgetting to complete it, whereas interviews allow for immediate responses from the participants. In the study, semi-structured interviews were conducted to explore the impact of poverty on the academic achievement of students with disabilities in the Nkanka sector of Rusizi district, involving head teachers, the Sector Education Inspector (SEI), and parents/guardians.

3.5 Data Analysis

The completed surveys underwent a thorough examination for coherence, and after being previously encoded, were evaluated utilizing the Statistical Package for the Social Sciences (SPSS Version 21.0) software. The collected data was condensed and organized in accordance with the research objectives. Analysis included both descriptive (frequencies, percentages) and inferential statistics like correlation analysis. The utilization of structured questionnaires allowed for the quantification of quantitative data through variables' size, frequency distribution, and associations within the study's population, as well as responses that could be numerically counted and expressed. Qualitative data was thematically coded and subsequently subjected to statistical analysis. Findings were presented through tables, graphs, and in narrative form.

The returned questionnaires were checked for consistency, and as they had been coded before, they were analysed using the Statistical Package for the Social Sciences (SPSS Version 21.0) computer software. The data was summarized and classified according to the objectives of the study. Both descriptive (frequencies, percentages) and inferential statistics such as correlation analysis were used for analysis. The use of structured questionnaires enabled the researcher to quantify quantitative data using the size, frequency distribution, and association of variables in the study population and answers to questions that

could be counted and expressed numerically. The qualitative data was coded thematically and then analysed statistically. The information was displayed by use of tables, graphs and in prose-format.

3.6 Validity and reliability

The two concepts are used to evaluate the quality of research. They indicate how well a method, technique or test measures something. Reliability is about the consistency of a measure while validity is about the accuracy of a measure.

3.6.1 Validity

According to (Enon, 1995), the concept 'validity' refers to the quality that a procedure or an instrument used in the research is accurate, correct, true, meaningful and right. De Vos et al. (2005) argue that validity comprises of two critical components. The first pertains to the degree to which an instrument effectively measures the targeted concept. The second component relates to the accuracy with which the concept is being measured. There are two types of validity: internal and external validity.

3.6.1.1 Internal validity

According to Macnee and McCabe (2008), the internal validity of a study refers to how accurate and appropriate the study's conclusions are for the participants who took part in it.

3.6.1.2 External validity

As Macnee & McCabe (2008) contend, external validity refers to problems with the environment or research process which make the results of the study less valid and accurate for other samples or settings. For the current study, the competent supervisor assessed the relevance of the content used in the developed questionnaire. He examined the questionnaire individually and provided feedback to the researcher. His correction and adjustment was incorporated in the final questionnaire.

3.6.2 Reliability

According to Mugenda and Mugenda (2003), reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials.

To test reliability of the instruments, the researcher selected a group of 20 individuals from Groupe Scolaire Nkanka for the piloting phase or pretest. Using Cronbach's Alpha, internal consistency techniques were used to verify the instruments' reliability. The alpha value varies from 0 to 1, and as it increases, reliability rises as well. According to a widely used guideline, a coefficient of 0.6 to 0.7 implies acceptable reliability, and 0.8 or higher suggests good reliability (Mugenda, 2003).

3.7 Ethical Considerations

The investigator sought research clearance form from the University of Rwanda, College of Education Rukara Campus. The researcher wrote a request for research permission letter on which she attached the introduction letter copy to be sent to the Sector Executive Secretary of the Sector Nkanka. By the time, the researcher took the time to explain her purpose and mission so as to get the respondents' cooperativeness. She also waited for authorization from the same leaders to collect data. After getting the feedback from sector and school officers, the researcher distributed questionnaires among various respondents by ensuring them that all information to be provided would be treated with high level of confidentiality. Confidentiality also guided interview schedule.

4.0 Introduction

This chapter is a presentation of data from primary data as collected through questionnaires and interviews. Descriptive statistics, frequencies and percentages are also presented.

4.1 Demographic profile of respondents

The profile of the teacher respondents included age, gender, marital status, highest education level and experience in the teaching field. With regards to student respondents, variables such as age, gender and year of study were also examined. Table 4 below shows the age of the teacher respondents.

Table 4: Age of teachers

Variables	Frequency	Percentage
Below 21	1	3.8
21-30	5	19.2
31-40	9	34.6
41-50	6	23.0
Above 50	5	19.2
Total	26	100.0

From the table 4 above, it can be noted that the researcher administered a questionnaire to 26 teacher respondents. All the questionnaires were returned and the social demographic information revealed that the majority of teachers (34.6%) were aged between 31 and 40 years old. Another proportion (23.0%) was aged between 41 and 50 years old; 19.2% were above 50 years of age while another similar proportion (19.2%) of young teachers were aged between 21 and 30 years. There was also a newly recruited teacher (3.8%) who was below 21 years of age. The fact that majority of teachers were reported to be aged between 31 and 50 years explains how obediently they could comply with the head teacher’s commands, orders or instructions.

Table 5: Gender of teachers

Variables	Frequency	Percentage
Male	17	65.3
Female	9	34.6

Total	26	100.0
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In terms of gender, data revealed that 65.3% of teachers were men and 34.6% were women. The lower percentage of female teachers is linked to the type of school. As education levels progress to secondary or tertiary, the proportion of female teachers tends to decline.

Table 6: Marital status of teachers

Variables	Frequency	Percentage
Single	9	34.6
Married	14	53.8
Widowed	2	7.6
Divorced	1	3.8
Total	26	100.0

Another variable which interested the researcher was the marital status. Responses showed that a high proportion (53.8%) of teachers were married while another proportion (34.6% were still single. A small proportion of 7.6% were widowed whereas one teacher (3.8%) represented the group of the divorced.

Table 7: Teachers Educational level

Variables	Frequency	Percentage
Masters	2	7.6
Bachelors	18	69.2
Diploma	5	19.2
Secondary school certificate	1	3.8
Total	26	100.0

With regards to teacher’s qualification, responses indicate that a high proportion (69.2%) of the teachers held a bachelor’s degree while 19.2% was holding a diploma in Education. Two teachers (7.6%) held a master’s degree while one (3.8%) teacher was holding a secondary school certificate.

The fact that most of the teachers were qualified to teach in secondary school could affect the academic achievement of learners with disabilities and living in poverty.

Table 8: Teacher's experience

Variables	Frequency	Percentage
<5 years	5	19.2
5-10 years	6	23.0
11-20 years	13	50.0
>20 years	2	7.6
Total	26	100.0

The teacher participants were then requested to provide details about their years of teaching experience. The results showed that the majority (50.0%) had been teaching for 11 to 20 years. A further 23.0% had an experience of 5 to 10 years, while 19.2% had less than 5 years of teaching experience. A small percentage (7.6%) of teachers had over 20 years of experience in the field.

Given their significant level of experience, experienced teachers may find it easier to assist students with disabilities in achieving academic success.

After presenting the socio-demographic profile of teachers, it also discussed the students' profile.

Table 9: Age of students

Variables	Frequency	Percentage
11-14	6	17.1
15-16	12	34.2
17-18	15	44.1
>18	2	5.7
Total	35	100.0

Students were another group of participants who were requested to complete the questionnaires. The researcher distributed a questionnaire to 35 student participants, and all the completed questionnaires were returned. The data collected on the social demographics showed that the majority of students (44.1%) were between the ages of 17 and 18. Another group (34.2%) fell within the age range of 15 to 16. Additionally, there was a 5.7% proportion of students above 18 years old, with 17.1% of respondents being between 11 and 14 years old. The senior students were specifically targeted by the researcher due to the expectation that they would be able to fill the questionnaire easily and accurately.

Table 10: Sex of students

Variables	Frequency	Percentage
Male	18	51.4
Female	15	42.8
Total	35	100.0

In terms of gender distribution, 51.4% of the student participants were male, while 42.8% were female.

Table 11: Class of students

Variables	Frequency	Percentage
Senior 1	2	4.3
Senior 2	3	8.6
Senior 3	5	13.0
Senior 4	8	17.3
Senior 5	7	23.1
Senior 6	10	33.3
Total	35	100.0

Source: Computed from Nkanka Sector Educational Statistics (2024)

The students were also asked to indicate their current class level. The responses revealed that a majority (33.3%) were in senior 6, followed by 23.1% in senior 5 and 17.3% in senior 4, 13.0% in senior 3; 8.6% in senior 2, and 4.3% in senior 1. The high percentage of students in senior 6 could be attributed to the researcher's decision to include a significant number of these students, considering their advanced reasoning abilities compared to younger students.

4.2 Presentation of the research findings

While analysing the findings, primary data from the field were presented and analysed basing on the research objectives of the study. In addition, objectives were addressed through the research questions which had been formulated to guide the study. Therefore, the first objective intended to investigate the correlation between socio-economic indicators of poverty and academic performance among learners with disabilities within the Nkanka Sector of Rusizi District. The second was to assess the impact of poverty on the academic achievement among learners with disabilities in the Nkanka Sector of Rusizi District.

4.2.1 Investigation of the correlation between socio-economic indicators of poverty and academic performance among learners with disabilities within the Nkanka Sector of Rusizi District

The first objective was to investigate the correlation between socio-economic indicators of poverty and academic performance among learners with disabilities within the Nkanka Sector of Rusizi District. A survey was conducted with teachers and students to gather information on these socio-economic factors. Furthermore, interviews were conducted with parents, school head teachers, and the Sector Education Inspector (SEI) to identify the socio-economic aspects that affect the academic success of students with disabilities in that region. The teachers' responses are summarized in the table 12 below:

Table 12: Teachers' responses on the correlation between socio-economic indicators of poverty and academic performance among learners with disabilities

SN	Statements	Options							
		S		D		A		S	
		F	%	F	%	F	%	F	%
1	Students with disabilities receive necessary school materials from their families.	10	38.4	0	0.0	2	7.6	14	53.8
2	Lack of parental support affects disabled students' learning.	1	3.8	1	3.8	0	0.0	24	92.3
3	The education level of underprivileged children's parents affects the children's academic success.	1	3.8	0	0.0	1	3.8	23	88.4
4	Children living in poverty have difficulty in school because they do not receive enough help at home.	0	0.0	1	3.8	0	0.0	24	92.3
5	In my view, people in poverty may not value education, increasing the likelihood of learning disabilities.	2	7.6	1	3.8	2	7.6	21	80.7

6	Children living in poverty are more likely to be labeled as students with disabilities.	3	11.5	0	0.0	1	3.8	22	84.6
7	Poverty raises the chance of a child being diagnosed with a learning disability.	2	7.6	1	3.8	0	0.0	23	88.4
8	My school is inclusive of all children, including those living in poverty and with disabilities.	0	0.0	0	0.0	0	0.0	25	100.0
9	The school provides supplies for the impoverished students disabilities to create a conducive learning environment.	18	69.2	4	15.3	0	0.0	3	11.5
10	Poverty is an indicator that a learning disability might exist.	8	30.7	2	7.6	7.6	0.0	16	61.5

n=26

According to the data presented in table 12, it is evident that student participants (92.3%) expressed strong agreement that children living in poverty face challenges in school due to lack of support at home. Similarly, the same percentage (92.3%) believed that disabled students' learning is impacted by the absence of parental support. Furthermore, 88.4% of teachers acknowledged that poverty increases the likelihood of a child being diagnosed with a learning disability. In addition, 84.6% of teachers strongly agreed that children from low-income families are more likely to be categorized as students with disabilities. Moreover, 80.7% of teachers agreed that individuals in poverty may not prioritize education, thus increasing the risk of learning disabilities. All teachers (100%) strongly agreed on the inclusivity of their schools where students with disabilities and non-disabled students can participate in the same activities. On the other hand, teacher participants (69.2%) indicated that the school does not provide necessary resources for students with disabilities from impoverished backgrounds to create a conducive learning environment as they strongly disagreed with the statement. The inadequate financial allocation by the Government for supporting students with disabilities in schools may be a contributing factor. After presentation of teachers' responses, it is presented in the table 13 below the views of students on socio-economic factors that influence the educational outcomes of the poor learners with disabilities.

Table 13: Students’ responses on the correlation between socio-economic indicators of poverty and academic performance among learners with disabilities

SN	Statements	Options							
		S		D		A		S	
		F	%	F	%	F	%	F	%
1	Students with disabilities at my school receive necessary school materials from their families.	19	52.7	0	0.0	6	23.0	10	28.5
2	Lack of parental support affects disabled students' learning.	0	0.0	0	0.0	0	0.0	35	100.0
3	The education level of underprivileged children's parents affects the children's academic success.	0	0.0	0	0.0	1	2.8	34	91.1
4	Children living in poverty have difficulty in school because they do not receive enough help at home.	0	0.0	0	0.0	0	0.0	35	100.0
5	In my view, people in poverty may not value education, increasing the likelihood of learning disabilities.	0	0.0	1	2.8	2	5.7	32	91.4
6	Children living in poverty are more likely to be labeled as students with disabilities.	3	8.5	0	0.0	2	5.7	30	85.7
7	Poverty raises the chance of a child being diagnosed with a learning disability.	2	5.7	4	11.4	0	0.0	29	82.8

8	My school is inclusive of all learners, including those living in poverty and with disabilities.	0	0.0	0	0.0	0	0.0	35	100.0
9	Our school gives supplies to poor disabled students to help them learn better.	28	80.0	0	0.0	4	11.4	3	8.5
10	Poverty is an indicator that a learning disability might exist.	4	11.4	0	0.0	0	0.0	31	85.7

n=35

According to the data in Table 13, the vast majority (100%) of student respondents expressed a strong agreement that children residing in impoverished conditions face academic challenges due to insufficient assistance at home. Furthermore, the absence of parental backing has a detrimental impact on the educational progress of disabled students. The entire cohort of students who participated in the survey strongly affirmed that their educational environment is inclusive, encompassing both disabled and non-disabled individuals. Approximately 91.1% of respondents also concurred that the educational attainment of underprivileged children's parents plays a significant role in influencing the academic achievements of the children. Similarly, individuals in poverty may not prioritize education, thereby increasing the likelihood of learning impairments. Moreover, a substantial proportion (85.7%) of respondents believed that children from impoverished backgrounds are more susceptible to being stigmatized as students with disabilities, while 82.8% agreed that poverty heightens the likelihood of a child being diagnosed with a learning disorder.

Despite these findings, there persists an issue in providing adequate support for disabled learners, particularly those living in poverty. This is underscored by the fact that a significant portion (52.7%) of respondents strongly disagreed with the notion that students with disabilities at their school receive essential educational resources from their families. Additionally, a majority of students (80.0%) reported a lack of support from their educational institution in terms of school materials.

In terms of parental perspectives, there was a close alignment with the views held by students and teachers. Parents also acknowledged the impact of socioeconomic status on the academic outcomes of students with disabilities. The presence of disabilities in these students may be linked to factors such as

familial poverty, which often leads to inadequate access to healthcare and a lack of resources for supporting their disabled children.

4.2.2 Assess the impact of poverty on the academic achievement of learners with disabilities in the Nkanka Sector of Rusizi District

The second objective was to assess the impact of poverty on the academic achievement of learners with disabilities in the Nkanka Sector of Rusizi District and the questionnaire survey was conducted with teachers and students to gather information on these socio-economic factors. Furthermore, interviews were conducted with parents, school head teachers, and the Sector Education Inspector (SEI) to assess the impact of poverty on the academic achievement of learners with disabilities in the Nkanka sector of Rusizi District. The table 14 below presents the responses from the teacher participants.

Table 14: Teachers’ responses on the impact of poverty on the academic achievement of learners with disabilities in the Nkanka Sector of Rusizi District

SN	Statements	Options							
		S		D		A		S	
		F	%	F	%	F	%	F	%
1	The disabled learners from lower socio-economic background perform poorly in the National Exams.	3	11.5	0	0.0	0	0.0	23	88.4
2	Disabled learners who are living in poverty frequently arrive at school late, leading to negative effects on their academic performance.	1	3.8	0	0.0	0	0.0	25	96.1
3	Disabled individuals living in poverty are at a high risk of developing various illnesses, leading to increased rates of absenteeism.	4	15.3	0	0.0	0	0.0	22	84.6
4	Disabled students whose parents live in chronic poverty frequently argue which leads to poor performance in assessments and	2	7.6	4	15.3	0	0.0	20	76.9

	exams.								
5	Students with disabilities demonstrate similar levels of performance as their healthy peers.	23	88.4	0	0.0	1	3.8	2	7.6

n=26

The data presented in Table 14 illustrates a consensus among teachers regarding the correlation between poverty and the academic performance of students with disabilities. An overwhelming majority (88.4%) of teachers expressed strong agreement that students from disadvantaged socio-economic backgrounds typically underperform in national examinations. Furthermore, 96.1% of educators believed that disabled students living in poverty often arrive late to school, negatively impacting their academic progress. Additionally, 84.6% of teachers noted that individuals with disabilities living in poverty face heightened health risks, resulting in increased rates of absenteeism. Family conflict emerged as another significant concern, with 76.9% of teachers observing a link between parental discord and poor academic performance among disabled students.

The overwhelming majority of teachers (88.4%) firmly disagreed with the notion that students with disabilities achieve academic outcomes on par with their non-disabled peers. Therefore, it is evident that students with disabilities living in poverty are at a disadvantage in terms of academic achievement, underscoring the imperative of providing robust support to this vulnerable group. This urgency is compounded by the Rwandan government's commitment to inclusive education policies.

Table 15: Students' responses on the impact of poverty on the academic achievement of learners with disabilities in the Nkanka Sector of Rusizi District

SN	Statements	Options							
		S		D		A		SA	
		F	%	F	%	F	%	F	%
1	The disabled learners from lower socio-economic background perform poorly in the National Exams.	10	28.5	0	0.0	0	0.0	25	71.4
2	Disabled learners who are living in poverty frequently arrive at school late, leading to negative effects on their academic	0	0.0	0	0.0	0	0.0	35	100.0

	performance.								
3	Disabled learners living in poverty are at a higher risk of developing various illnesses, leading to increased rates of absenteeism.	0	0.0	0	0.0	1	2.8	34	91.1
4	Disabled students whose parents live in chronic poverty frequently argue which leads to poor performance in assessments and exams.	0	0.0	0	0.0	0	0.0	35	100.0
5	Students with disabilities demonstrate similar levels of performance as their healthy peers.	24	68.5	1	2.8	2	5.7	8	22.8

n=35

Based on the findings in Table 15, it is blatant that all students unanimously concurred that disabled learners living in poverty often arrive late to school, resulting in detrimental impacts on their academic achievements. Similarly, a full 100% of the students agreed emphatically that disabled students with parents facing chronic poverty frequently engage in arguments, which subsequently affects their performance in assessments and examinations. Additionally, a significant majority of 91.1% of the students expressed strong concurrence that disabled learners from impoverished backgrounds face heightened risks of contracting various illnesses, leading to elevated rates of absenteeism. Lastly, 68.5% of the students adamantly disagreed with the notion that students with disabilities perform at similar levels as their healthy counterparts.

Of course that students' reactions mirrored those of the teachers, indicating a common belief that students from lower socioeconomic backgrounds tend to underperform in national exams and school assessments. In addition, the opinions of the head teachers and Sector Education Inspector interviewed were aligned with those of the teachers, highlighting the importance of prioritizing special needs education and inclusive education for both the central and local governments.

4.2.3 Suggest strategies and recommendations to improve academic achievement among low-income students with disabilities in the Nkanka Sector of Rusizi District

Like on the first and second objectives, the researcher he questionnaire survey was conducted with teachers and students to gather information on the strategies to improve academic achievement of low income learners with disabilities. Furthermore, interviews were conducted with parents, school head teachers, and the Sector

Education Inspector (SEI) to suggest those strategies. The table 16 below presents the responses from the teacher participants.

Table 16: Teachers’ responses on strategies to improve academic achievement among low-income learners with disabilities

SN	Statements	Options							
		S		D		A		S	
		F	%	F	%	F	%	F	%
1	Teachers should establish efficient communication with their students in order to foster a conducive learning environment.	3	11.5	0	0.0	0	0.0	22	84.6
2	Teachers should undergo comprehensive training in the field of Special Education.	7	26.9	0	0.0	0	0.0	19	73.0
3	Students with special needs require more intensive monitoring and guidance.	0	0.0	0	0.0	0	0.0	26	100.0
4	Improving the school environment is essential in fostering academic success for economically disadvantaged students with disabilities.	4	15.3	1	3.8	0	0.0	21	80.7
5	It is important for all relevant parties to be actively involved in the process of educating economically disadvantaged students with disabilities.	0	0.0	0	0.0	0	0.0	0	100.0
6	Revisions to the policy on special needs education and inclusive education are necessary in order to safeguard economically disadvantaged students with disabilities.	2	7.6	0	0.0	2	7.6	23	88.4

n=26

Based on the data presented in Table 16, it is blatant that a vast majority of teachers (100%) are in strong agreement that active participation from all relevant entities is crucial in the education of economically disadvantaged students with disabilities. This highlights the necessity for stakeholders such as the Ministry of Education, Ministry of Local Government, non-governmental organizations, and parents to prioritize education.

Similarly, all teachers surveyed (100%) expressed the importance of providing intensive monitoring and guidance to students with special needs. Furthermore, a significant portion of teachers (84.6%) emphasized the need for effective communication between teachers and students to create a conducive learning environment. Additionally, 88.4% of teachers indicated that policy revisions related to special needs education and inclusive education are vital to support economically disadvantaged students with disabilities.

Moreover, a majority of teachers (80.7%) emphasized the significance of enhancing the school environment to promote academic success for economically disadvantaged students with disabilities. Lastly, 73.0% of teachers advocated for comprehensive training in Special Education for educators to cater to individual learners' needs, promoting academic achievement.

The opinions of school head teachers, the Sector Education Inspector, and parents align with those of teachers and students. They all concur that disabled students from disadvantaged economic backgrounds should receive support both financially and psychologically. It is imperative that disabled students living in poverty receive educational resources to enhance their academic performance. Given that teachers play a crucial role in the lives of students, it is essential to improve the training of teachers in special education needs to effectively and efficiently support the academic success of students with disabilities, particularly those facing chronic poverty. Following the discussion regarding strategies for enhancing academic performance among economically disadvantaged students with disabilities, the subsequent table 17 illustrates the perspectives of students.

Table 17: Students’ views on strategies to improve academic achievement among low-income learners with disabilities

SN	Statements	Options							
		S		D		A		S	
		F	%	F	%	F	%	F	%
1	In order to cultivate a positive learning atmosphere, it is essential for my teachers to improve their communication skills and effectively engage with us.	5	14.2	0	0.0	0	0.0	30	85.7
2	My teachers should undergo comprehensive training in the field of Special Education.	12	34.2	0	0.0	0	0.0	23	65.7
3	Students with special needs require more intensive monitoring and guidance.	2	5.7	0	0.0	0	0.0	33	94.2

4	Improving the school environment is essential in fostering academic success for economically disadvantaged students with disabilities.	0	0.0	0	0.0	0	0.0	35	100.0
5	It is important for all relevant parties to be actively involved in the process of educating economically disadvantaged students with disabilities.	0	0.0	0	0.0	0	0.0	35	100.0
6	Revisions to the policy on special needs education and inclusive education are necessary in order to safeguard economically disadvantaged students with disabilities.	13	37.1	0	0.0	0	0.0	22	62.8

n=35

The data presented in Table 17 indicates that all students overwhelmingly agreed on the importance of improving the school environment to support the academic success of economically disadvantaged students with disabilities, emphasizing the need for active participation from all relevant stakeholders in the educational process. Additionally, a high percentage of students (94.2%) strongly supported the idea that students with special needs require enhanced monitoring and guidance for their development. Moreover, a significant majority of students (85.7%) expressed a strong belief in the significance of teachers improving their communication skills and effectively engaging with students to cultivate a positive learning environment. A notable portion of students (65.7%) emphasized the necessity for teachers to receive comprehensive training in Special Education, while a considerable percentage (62.8%) highlighted the importance of policy revisions in special needs and inclusive education to protect economically disadvantaged students with disabilities.

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

In this section, the researcher discusses the findings of the research, the implications of these findings, and suggests recommendations in light of the results.

5.1 Discussion of the findings

The aforesaid findings are discussed in relation to the study objectives and research questions and literature review.

5.1.1 Identification of the socio-economic factors that influence the educational outcomes of learners with disabilities living in poverty

The first objective sought to identify the socio-economic factors that influence the educational outcomes of learners with disabilities living in poverty in Nkanka sector of Rusizi district and the findings reported that socioeconomic factors affect the learning conditions of learners with disabilities. Learners from low-income families are more likely to be categorized as students with disabilities and parents in poverty pay less attention on the education of their children. The findings are in tandem with Rothstein (2008) who argues that students living in poverty are cared for less often and supervised less often. Herman-Smith (2013) underscores it when he points out that families living in poverty have a difficult time supporting the educational process. Parents have trouble coping with the stress of work, finances, and helping their kids. It was also in the study that parents from lower socioeconomic background fail to find school materials and assistive devices for their children. This affects the learning atmosphere of the learner because as Maslow (1954) believed, a student has to satisfy the levels of human needs before he/she can be expected to feel confident about themselves and learn to be creative problem solvers.

5.1.2 Assessment of the impact of poverty on the academic achievement among learners with disabilities in the Nkanka Sector of Rusizi District

The second objective sought to assess the impact of poverty on the academic achievement among learners with disabilities in the Nkanka Sector of Rusizi District, unveiling a positive correlation between poverty and academic success within this group. Those from disadvantaged socioeconomic backgrounds tend to underperform in National Examinations conducted by the National Examinations and School Inspection Authority (NESA). Additionally, it was noted that disabled children residing in impoverished environments often experience absenteeism, which can negatively impact their academic performance in assessments and exams. These results are consistent with Hester's (2019) finding that a considerable number of children from low socioeconomic backgrounds struggle to read at their grade level. According

to Shaked (2016), students from more affluent backgrounds demonstrate stronger executive functioning abilities. This disparity may be due to the potential for enhanced development or increased volume of the dorsolateral Prefrontal Cortex in individuals from higher socioeconomic statuses, allowing them to enhance their executive functioning skills throughout their lives. Shaked (2016) also explained that brains with larger volume consistently display improved cognitive performance, suggesting that lower socioeconomic status is linked to smaller brain volume and consequently weaker executive functioning skills.

Furthermore, the research findings indicated that academic success was not evenly distributed, as disabled learners living in poverty achieved less than those from higher socioeconomic backgrounds. These findings align with Herman-Smith (2013) who argues that children brought up in environments where higher incomes are common in the family tend to outperform children raised by parents living in poverty.

5.1.3 Strategies and recommendations to improve academic achievement among low-income students with disabilities in the Nkanka Sector of Rusizi District

The third objective of the study was to propose strategies and recommendations for enhancing academic performance among economically disadvantaged students with disabilities in the Nkanka Sector of Rusizi District. It was determined that key strategies include fostering active engagement from all relevant stakeholders, providing thorough monitoring and guidance to students with special needs, facilitating effective communication between educators and students to establish a supportive learning environment, revising policies pertaining to special needs education and inclusive practices. It is crucial to address these aspects in order to offer support to economically disadvantaged students with disabilities and improve the educational setting to foster academic success among this student population. The findings align with Maotoana's (2014) assertion that creating conducive learning environments both at school and at home, such as providing accessibility aids like wheelchairs, can mitigate challenges faced by students with special needs and contribute to enhancing academic outcomes for low-income learners with disabilities.

5.2 Conclusions

The aim of the current study was to examine the impact of poverty on the academic performance of students with disabilities in the Nkanka sector of Rusizi district. The study was guided by three specific objectives: to identify the socioeconomic factors influencing the educational outcomes of students with disabilities living in poverty in Nkanka sector of Rusizi district, to assess the impact of poverty on the academic achievement of learners with disabilities in the Nkanka Sector of Rusizi District and to

suggest strategies and recommendations to improve academic achievement among low-income learners with disabilities in the Nkanka Sector of Rusizi District.

Upon analysing the results, it was determined that socioeconomic factors such as family income have an effect on the learning abilities of disabled students, leading to increased stress that may impede academic progress. Additionally, the lack of necessary learning resources and assistive devices for disabled students due to financial constraints further hinders their academic performance.

The study concluded that inclusive education in the Nkanka sector of Rusizi district was at a satisfactory level, as all three secondary schools in the area included both disabled and non-disabled students. Despite the lack of necessary learning materials and equipment to support disabled students, teachers prioritized the needs of disabled students within the inclusive classroom setting.

In relation to the second objective, it was established that there is a correlation between poverty and academic achievement among students with disabilities in the Nkanka sector of Rusizi district, with disabled students performing more poorly than their non-disabled counterparts, particularly in national examinations. The same types of learners often experience absenteeism, which can negatively impact their academic performance in assessments and exams.

As for as the third objective, it was concluded that key strategies include fostering active engagement from all relevant stakeholders, providing thorough monitoring and guidance to students with special needs, facilitating effective communication between educators and students to establish a supportive learning environment, revising policies pertaining to special needs education and inclusive practices. It is crucial to address these aspects in order to offer support to economically disadvantaged students with disabilities and improve the educational setting to foster academic success among this student population.

5.3 Recommendations

According to the key findings of the research, the subsequent suggestions are put forward to enhance the academic success of students with disabilities hailing from lower socioeconomic backgrounds in the Nkanka Sector of Rusizi District.

5.3.1 To the Ministry of Education and its affiliated agencies

The study proposes that the Ministry of Education provide mainstream schools with essential resources to meet the needs and desires of disabled learners. This should be accompanied by comprehensive training for teachers in mainstream schools to ensure they have adequate knowledge of special education requirements.

5.3.2 To the Ministry of Local Government

It is imperative to enhance the socioeconomic conditions of low-income households as there exists a correlation between poverty and substandard academic performance, particularly among students with disabilities. Alongside the existing socioeconomic initiatives like Ubudehe and Girinka, individuals with disabilities should be given significant consideration by the authorities.

5.3.3 To local education officers (DDE, SEI and school head teachers)

Educational administrators, ranging from the district to the school level, are encouraged to create a flexible working environment for teachers to alleviate stress and prevent burnout. This initiative could enhance morale among teachers and allow them to better meet the individual needs of students, particularly those with disabilities. Additionally, it is advised that comprehensive teacher training programs, along with the sharing of knowledge and experience between special and inclusive schools, be organized and executed to optimize the involvement of students with disabilities in social and academic pursuits.

5.3.3 To Parents and the Local Community

Parents, as key participants in their children's education, should make every effort to provide both psychological and financial support, ensuring that their children's basic needs are met in order to facilitate academic success, particularly in national examinations.

5.3.4 Areas for further research

A research study examining the effects of poverty on the academic performance of students with disabilities in special education settings is warranted, as previous research has primarily focused on students enrolled in mainstream schools. Moreover, there is opportunity to explore the various factors influencing the academic success of students with disabilities in both special education and mainstream school environments.

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APPENDIX 1: QUESTIONNAIRE DESIGNED FOR SECONDARY SCHOOL TEACHERS

Dear respondent,

I am AGNES UMUTONI, a student from *UNIVERSITY OF RWANDA*, College of Education, and I am carrying out research on **Effect of Poverty on Academic Achievement of Learners with Disabilities in the Nkanka Sector of Rusizi District** and I would like to kindly ask you to help me tofill in the questionnaire below.

Your participation in this study is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. The choice that you make will have no bearing on your professional standing or your everyday life.

Section A: Background information

Dear respondent, please circle the figure corresponding to your choice:

- 1) Age: 1. below 21 2. 21-30 3. 31-40 4. 41-50 5. > 50
- 2) Gender: 1. Male 2. Female
- 3) Marital status: 1. Single 2. Married 3. Widowed 4. Divorced
- 4) Highest educational level: 1. Masters 2. A0 3. A1 4. A2
- 5) Experience in the teaching field:
 1. <5 years 2. 5-10 years 3. 11-20 years 4. >20 years
- 6) Have you undergone training in special needs education?
 Yes, No
- 7) Have you attended in-service training in Special needs education?
 Yes, No

Section B:

B.1 Socioeconomic factors and educational outcomes of low-income students with disabilities

Please use the following Likert's system to answer this section. Write the most appropriate figure where SD=1; D=2; A= 3; SA=4.

SD = Strongly Disagree; **D** =Disagree; **A** = Agree; **SA** = Strongly Agree

No	Statements	SD	D	A	SA
1	Students with disabilities receive necessary school materials from both home and school.				
2	Lack of parental support affects disabled students' learning.				
3	The education level of underprivileged children's parents, affects the children's academic success.				

4	Children living in poverty have difficulty in school because they do not receive enough help at home.				
5	In my view, people in poverty may not value education, increasing the likelihood of learning disabilities.				
6	Children living in poverty are more likely to be labeled as students with disabilities.				
7	Poverty raises the chance of a child being diagnosed with a learning disability.				
8	My school is inclusive of all children, including those living in poverty and with disabilities.				
9	The school provides supplies for the impoverished students disabilities to create a conducive learning environment.				
10	Poverty is an indicator that a learning disability might exist.				

11. Do you believe that students who live in impoverished conditions face a disadvantage when it comes to accessing educational opportunities? Kindly elaborate on your viewpoint.

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12. Is your district able to effectively identify and support students with disabilities who live in conditions of poverty?

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B.2 Impact of poverty on the academic achievement of learners with disabilities

Please use the following Likert’s system to answer this section. Write the most appropriate figure where SD=1; D=2; A= 3; SA=4.

SD = Strongly Disagree; **D** =Disagree; **A** = Agree; **SA** = Strongly Agree

No	Statements	SD	D	A	SA
1	The disabled learners from lower socio-economic background perform poorly in the National Exams.				
2	Disabled learners who are living in poverty frequently arrive at school late, leading to negative effects on their academic performance.				
3	Disabled individuals living in poverty are at a higher risk of developing various illnesses, leading to increased rates of absenteeism.				
4	Disabled students whose parents frequently argue tend to perform poorly in assessments and exams.				
5	Students with disabilities demonstrate similar levels of performance as their healthy peers.				

6. What do you think about how accessible educational materials affect academic success for poor students with disabilities?

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B.3 Strategies and recommendations to improve academic achievement among low-income students with disabilities

Please use the following Likert’s system to answer this section. Write the most appropriate figure where SD=1; D=2; A= 3; SA=4.

SD = Strongly Disagree; **D** =Disagree; **A** = Agree; **SA** = Strongly Agree

No	Statements	SD	D	A	SA
1	Teachers should establish efficient communication with their students in order to foster a conducive learning environment.				
2	Teachers should undergo comprehensive training in the field of Special Education.				
3	Students with special needs require more intensive monitoring and guidance.				
4	Improving the school environment is essential in fostering academic success for economically disadvantaged students with disabilities.				
5	It is important for all relevant parties to be actively involved in the process of educating economically disadvantaged students with disabilities.				
6	Revisions to the policy on special needs education and inclusive education are necessary in order to safeguard economically disadvantaged students with disabilities.				

7. What additional strategies do you believe are crucial in enhancing the academic success of underprivileged students with disabilities?

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APPENDIX 2: QUESTIONNAIRE DESIGNED FOR SECONDARY SCHOOL STUDENTS

Dear student,

I am AGNES UMUTONI, a student from *UNIVERSITY OF RWANDA*, College of Education, and I am carrying out research on **Effect of Poverty on Academic Achievement of Learners with Disabilities in the Nkanka Sector of Rusizi District** and I would like to kindly ask you to help me to fill in the questionnaire below.

Your participation in this study is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. The choice that you make will have no bearing on your professional standing or your everyday life.

Section A: Background information

Dear respondent, please circle the figure corresponding to your choice:

1) Age: 1. below 12 2. 12-15 3. 16-18 4. > 18

2) Gender: 1. Male 2. Female

3) Year of study

Senior 1 Senior 4

Senior 2 Senior 5

Senior 3 Senior 6

Section B:

B.1 Socioeconomic factors and educational outcomes of low-income students with disabilities

Please use the following Likert's system to answer this section. Write the most appropriate figure where SD=1; D=2; A= 3; SA=4.

SD = Strongly Disagree; **D** =Disagree; **A** = Agree; **SA** = Strongly Agree

No	Statements	SD	D	A	SA
1	Students with disabilities at my school receive necessary school materials from both home and school.				
2	Lack of parental support affects disabled students' learning.				

3	The education level of underprivileged children's parents' affects the children's academic success.				
4	Children living in poverty have difficulty in school because they do not receive enough help at home.				

5		In my view, people in poverty may not value education, increasing the likelihood of learning disabilities.				
6		Children living in poverty are more likely to be labeled as students with disabilities.				
7		Poverty raises the chance of a child being diagnosed with a learning disability.				
8		My school is inclusive of all learners, including those living in poverty and with disabilities.				
9		Our school gives supplies to poor disabled students to help them learn better.				
10		Poverty is an indicator that a learning disability might exist.				

11. Do you think that students who live in impoverished conditions face a disadvantage when it comes to accessing educational opportunities?

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12. Do your local leaders from your village identify and support students with disabilities who live in conditions of poverty?

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B.2 Impact of poverty on the academic achievement of learners with disabilities

Please use the following Likert’s system to answer this section. Write the most appropriate figure where SD=1; D=2; A= 3; SA=4.

SD = Strongly Disagree; **D** =Disagree; **A** = Agree; **SA** = Strongly Agree

No	Statements	SD	D	A	SA
1	The disabled learners from lower socio-economic background perform poorly in the National Exams.				
2	Disabled learners who are living in poverty frequently arrive at school late, leading to negative effects on their academic performance.				
3	Disabled individuals living in poverty are at a higher risk of developing various illnesses, leading to increased rates of absenteeism.				
4	Disabled students whose parents frequently argue tend to perform poorly in assessments and exams.				
5	Students with disabilities demonstrate similar levels of performance as their healthy peers.				

6. What do you think about how accessible educational materials affect academic success for poor students with disabilities?

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B.3 Strategies and recommendations to improve academic achievement among low-income students with disabilities

Please use the following Likert’s system to answer this section. Write the most appropriate figure where SD=1; D=2; A= 3; SA=4.

SD = Strongly Disagree; **D** =Disagree; **A** = Agree; **SA** = Strongly Agree

No	Statements	SD	D	A	SA
1	My teachers should establish efficient communication with their students in order to foster a conducive learning environment.				
2	My teachers should undergo comprehensive training in the field of Special Education.				
3	Students with special needs require more intensive monitoring and guidance.				
4	Improving the school environment is essential in fostering academic success for economically disadvantaged students with disabilities.				
5	It is important for all relevant parties to be actively involved in the process of educating economically disadvantaged students with disabilities.				
6	Revisions to the policy on special needs education and inclusive education are necessary in order to safeguard economically disadvantaged students with disabilities.				

7. What additional strategies do you believe are crucial in enhancing the academic success of underprivileged students with disabilities?

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APPENDIX 3: INTERVIEW QUESTION GUIDE FOR PARENTS

1. How old are you?
2. Can you tell me about your educational level?
3. What is your profession/occupation?
4. Could you please tell us about your monthly income in American dollars?
5. Do you find it challenging to cover the expenses associated with your children's educational fees?
6. Do you agree that the education level of underprivileged children's parents affects the children's academic success?
7. What about lack of parental support? Does it affect academic achievement of learners with disabilities?
8. Do you believe that students who live in impoverished conditions face a disadvantage when it comes to accessing educational opportunities?
13. Is your district able to effectively identify and support students with disabilities who live in conditions of poverty?
13. Do you have a disabled child? If Yes, can you tell me about his/her academic success and challenges you face catering them.
14. How do learners with disabilities perform in their assignments (school level, district level or nationwide) compared with their sighted peers?
15. What challenges do you feel that learners with disabilities encounter during these tests and examinations?
16. What do you think about how accessible educational materials affect academic success for poor students with disabilities?

APPENDIX 4: INTERVIEW QUESTION FOR THE HEADTEACHER AND THE SEI

1. How many years have been in this position?
2. What is your educational attainment? What is your specialty?
3. Do you have students with special educational needs? How many?
4. Have you ever got training about students with SEN? What kind of training?
5. How do you define inclusive education?
6. Do you think if you can put it into practice? Please give a detailed example.
7. What do you think of students with SEN? What impressed you most? Do you know their limitations and capabilities?
8. What is the most frequent barrier for students with SEN in regular classroom?
9. What initiatives does the institution do to help support students living in poverty? Are any of these programs specific to the disabled learners?
10. Do you see any relationship between poverty and learning disabilities? Can you please explain why or why not?
11. Do you think that disabled students living in conditions of poverty have a disadvantage regarding educational opportunities? Please explain.
12. What are some of the ways your school/administration has put forth to support families of poverty through the learning process? Is it effective? Why or why not?

ADMINISTRATIVE MAP OF RUSIZI DISTRICT



ADMINISTRATIVE MAP OF RUSIZI DISTRICT 1