

ISSN Online: 2616-8383



Stratford
Peer Reviewed Journals & books

**Teaching and Learning Barriers in Inclusive Education for
Physically Impaired Students and Their Academic
Performance in Selected Secondary Schools in Rwanda a
Case in Bugesera District**

Hategekimana Jean Marie Vianney & Mukulira

2616-8383

Teaching and Learning Barriers in Inclusive Education for Physically Impaired Students and Their Academic Performance in Selected Secondary Schools in Rwanda a Case in Bugesera District

^{1*}Hategekimana Jean Marie Vianney & ²Mukulira Olivier

¹Postgraduate Student, Mount Kenya University, Rwanda

²Senior Lecturer, Mount Kenya University

*Email of Corresponding Author: hategekimanajmv85@gmail.com

How to cite this article: Hategekimana, J. M., & Mukulira, O. (2022). Teaching and Learning Barriers in Inclusive Education for Physically Impaired Students and Their Academic Performance in Selected Secondary Schools in Rwanda a Case in Bugesera District. *Journal of Education* 6(2), 97 - 129. <https://doi.org/10.53819/81018102t6008>

Abstract

Rwandan Education System gives equal chances to all students to access schooling regardless of their background including students with physical disability by empowering them with well-equipped skills, values, attitude and knowledge needed for every child without any discrimination. The main target of this research project was to examine the effect of learning and teaching barriers in inclusive education for physically impaired students on their academic performance in selected secondary schools of Bugesera District, Rwanda. The researcher adopted the descriptive survey design because the study sought to gain insight or perception into a phenomenon as a way of providing basic information in an area of study and the population of this study comprised of 647 respondents including 185 teachers, 15 head teachers, 432 students 15 deputy head teachers in charge of studies. The Researcher used simple random sampling technique to choose students, Stratified sampling technique was used to select teachers and the researcher used purposive sampling to select head teacher and deputy head teachers. The researcher used Yamane formula to determine the sample size population. Objective one was based on the identification of teaching and learning barriers therefore The findings revealed that the teaching and learning barriers were inadequate school infrastructures barriers, inappropriate teaching and learning approaches used by the teachers, lack of parents engagement and teachers qualification. Objective two was based on the impact of teaching and learning barriers on physically impaired students 'academic performance therefore results indicated that 95.9% of respondents highlighted that they affect students' academic performance negatively. Therefore it was indicated with the Pearson correlation coefficient(r) of 0.941 to indicate that they were strongly positively and statistically significant means that the well-dressed teaching and learning barriers in inclusive education for physically impaired students enhance the students' academic performance in secondary schools of

<https://doi.org/10.53819/81018102t6008>

Bugesera District, Rwanda. It was shown by the regression analysis model with R Square of 0.886 means that more strategies to prevent teaching and learning barriers were appreciated to enhance, promote the Students' academic performance in Rwanda. The Researcher recommended that government should continue advocating for the physically impaired students for the betterment of their academic performance, Ministry of education should organize CPDs for the teachers on how to identify and support the SEN, and Government should promote job creation for the SEN students after completion of their education.

Keywords: *Teaching and Learning Barriers, Inclusive Education, Impaired Students, Academic Performance, Physically Impaired Students.*

1.1 Introduction and Background

Globally, people who are physically impaired are classified in most marginalized groups in the worldwide; they are at more risk of poor health outcome, low levels of education performance, poor economic participation and high poverty rate compared to other people without any other kind of disability in the world (UNESCO, 2014). Students with physical disability face some barriers in school environment that can affect their social, psychological and academic spheres that may likely affect their academic performance at school. Some of these barriers are related to inadequate infrastructure, lack of teachers' knowledge and lack of parents' facilitation.

Physically disabled people experience more challenges to profit and enjoy school environments, school practical activities due to fewer priorities given by school community, teachers, students, parents and other education stakeholders in their everyday life to fulfill their special needs at schools (Leod, 2014). In Russia people with disabilities, with their parents and disability activists responded that there are no national standards for inclusive education and teachers in both mainstream and specialized school lack training to educate students with physical disabilities. That mainstream schools don't have the reasonable accommodations such as wheelchair ramps, assistive technology, or teachers' aids that children with various disabilities need (Chubon, 2014).

Despite Rwandan Government commitment on setting up education for all, significant effort should be made for Rwandan education system to be able to set up schools which can accommodate all students regardless of the type of disabilities they may have (UNICEF, 2015) Teachers in general education settings must be ready for the diversity among the students in their classrooms; nevertheless, Some Rwandan teachers are not yet prepared to Handle Students with special educational needs. (UNICEF, 2015) Many of them have little understanding of applying differentiation in teaching or learning outcomes, and have not enough knowledge on inclusive education of physically disabled students which can lead to drop out of those students. There is only one Higher Learning Institutions which offer training on special needs and Inclusive education which is in University of Rwanda which cannot train all teachers in area of inclusive education, There is thus little support for children with disabilities in mainstream or inclusive settings as there is no formal system of support for teachers or children.

The construction and architecture of most schools' infrastructure in Rwandan schools is quietly targeted to improve schooling of learners without any impairments and special needs. The school buildings like library, science laboratories, washrooms, and many classrooms are only accessible through stairs.

Most notable physical barriers include distance heavy doors, steep ramp, and rough surface hence the lack of support becomes a barrier to their education (UNICEF 2015). Tanyi (2006) advises that special training is important in teacher education because ethical values are taught to enhance positive attitudes of the teachers that may affect their attitudes in the classroom and may bring the expected norms and standards for quality education. Inclusiveness of the learners with physical impairments did not indicate by improving and allocating them in classes rather teachers' knowledge, school infrastructure and parents mind set need to change so that they can better allow more diversity of students 'needs and make sure that most of physically impaired learners participated in all school activities and perform better academically. Governments wish to implement more educational strategic plans to guard against more issues of children with special needs especially the lack of a high number of qualified and trained teachers for secondary schools level, lack of adequate and friendly Infrastructure and lack of parents involvement in education of their children (SADPD, 2012).

1.2. Problem Statement

Currently every country is targeting to have free, quality, access and equity education for the whole population starting with nursery, primary and secondary schools as well as universities for all (UNICEF 2015). Existing records reveal that for more than 1 80 million in young people live with physical disabilities bad enough to make their day to day living difficult .The poor infrastructure, insufficient knowledge and lack of support of parents provide many challenges and barriers to the disabled at times leading them to stay in their rooms in isolation or learning in an un conducive environment (UNICEF, 2011).

Rwandan Education System has given equal chances of all students to access schooling regardless their background including students with physical disability by empowering them with acquisition of the needed knowledge , skills , values and attitude for full participation in social economic development especially decision making and democratic process. (UNICEF, 2015).

Physical disability limits the students to perform highly due to the different barriers they face in and out of the schools of secondary schools and most of the barriers are teachers' Qualification, community attitudes to support children with disabilities, teaching approaches, Parents engagement and schools infrastructures. Ministry of education reported that there is a big challenges of dropout rate where there is 8.53% of dropped out students were the physically impaired students specifically 1.64% of them were from Bugesera District (Mineduc, 2018).Therefore, the researcher intended to find out the impact of teaching and learning barriers in inclusive education for physically impaired students on their academic performance in selected secondary school of Bugesera District, Rwanda.

1.3 Objectives of the study

General objective of this study was to assess the effect of teaching and learning barriers in inclusive education for physically impaired students on their academic performance in selected secondary schools in Bugesera District, Rwanda.

2.0 Literature Review

2.1. Inclusive Education

Inclusive education is very crucial and a good concepts to be taught as it is referred and reserved for every child without any kind of discrimination based on any means like disability, religious

and other marginalized groups to gain all benefits from all forms of education like non formal and formal education, inclusiveness applied to all children without any consideration of their backgrounds. Special needs education is defined as process to take in all children including learners with disabilities and help everyone to access all forms of education and to responds their needs (UNESCO, 2012).

Many people tried to discuss this concept of inclusive education according to their views and specialties. Emerson, E., McConkey, R (2008).

Holloway & McConkey, 2009 stipulate that inclusive education (IE) is a strategy for allowing, raising and make every learners participate and eliminate any kind of discrimination to fulfill learners different needs. It require everyone to take into consideration all marginalized and vulnerable learners in teaching and learning process, here children stated are streets children , girls, children from ethnic minorities, children from economically disadvantaged families, children from nomadism people , refugees displaced family, children with HIV/AIDS and children with disabilities. Inclusive education targeted to certify that all learners have right to access all facilities in education system (UNESCO, 2012). This requires more inclusion and participation because learners with SEN must sit and work with others. Students with higher economic status must seat and work with the poor and girls must learn with boys (SSFASNE, 2015). Inclusive education is defined as creation of setting where every community is integrated whole situation of the society without bearing mental, physical capabilities, disabilities, socio economic status and man –made constructions such as -Consider more methods of financing education which could be relevant to your district. - Why should governments and families favour educational provision? Religious, ethnic group and geographical specification (Bhama, 2009).

2.1.2 Students with Physical disability and inclusive education

Impairments can be appeared in different forms , sometimes , impairment can be permanent and others can be temporary or created by nature, those impairment can be linked to cerebral palsy, arthritis, muscular, dystrophy, multiple sclerosis(MS), Parkinson ‘disease strain injuries and repetitive, back or Neck injury may also distress motion (Calstrateedu,2009)It is impossible to generalize about the functional abilities of students with mobility impairments due to the wide variety of types of disabilities and specific diagnoses, accommodations for students with mobility impairments include: Preferential and accessible seating, computer modifications to access word processing programs, audio taped class sessions, extended examination as well as assignments deadlines (Access STEM 2014).

Diverse appropriate classroom infrastructures such as positioning sitting places, build in cupboards and boards or in inclusive classroom settings do facilitates movements in and out of class and eliminate some of the barriers disabled children face in regular schools (Rahman, 2008). Teachers in general education settings must be ready for the diversity among the students in their classrooms; nevertheless, Some Rwandan teachers are not yet prepared to handle Students with special educational needs. (UNICEF, 2015) Many of them have little understanding of applying differentiation in teaching or learning outcomes, and have not enough knowledge to inclusive education of physical disabilities students which can lead to drop out of those students. There is only one Higher Learning Institution which offers training on special need and Inclusive education which is in University of Rwanda which cannot train all teachers in area of inclusive education, There is thus little support for children with disabilities in mainstream or inclusive

settings as there is no formal system of support for teachers or children. Tanyi, (2006), advises that special training is important in teacher education because ethical values are taught to enhance positive attitudes of the teachers that may affect their attitudes in the classroom and may bring the expected norms and standards for quality education.

In Rwanda there are only 92 Inclusive schools which are not found in all Districts. The special schools are very few in numbers and the demand exceeds the supply. Which force the parents to do not always willing to enroll their children with disabilities and tend to take them to special schools directly if they can afford to do so, or to keep them at home because they do not think they can be enrolled. Besides that, it remains culturally difficult for a parent to admit they have a child with disabilities and some these children are mistreated at their families, Hence the lack of their support becomes the barrier to their education (UNICEF, 2015).

Inclusive education can be reached easily by joining learners into classrooms, relatively to teachers 'knowledge, school infrastructure and parents mind set should be changed to have same understanding responding all learners needs and ensuring that all students with disabilities especially those of physical impairment participate in all features of school environment and perform academically better.

Governments wish to implement more educational strategic plan for guarding against more issues of children with specials needs especially issues of lack of high number of qualified and trained teachers for secondary schools level,, lack of adequate and friendly Infrastructure and lack of parents involvements in education of their children(Sailor,2002).

2.1.3 Effect of physical disability on Students Learning

The impact of physical impairment on teaching and learning varies but more challenges relate with accessing, manipulating all resources including science laboratory materials, computers laboratory, field trips and enjoying schools facilities, in general, students with physical impairment may be impacted in the following ways: shortage of moving in the school venue, tiredness and miss enrollment, use of school facility like toilet rooms, foods outlet, school library and classrooms. Students with physical disabilities may face different challenges including functioning difficulties, inability to write by use of pens, writings speeds, reductions of abilities for manipulating school resource in teaching and learning process. Those difficulties may affect students with disabilities in their everyday life and reduce their confidence during learning environment and negatively affect their participation, collaboration with others learners and spirits of separations in the learning and teaching process also may affect their academic performance (Gorter, 2009). Milson (2006) stated that the students with disabilities are generally wanted to isolate themselves from other learners and they are at high risk areas to develop psychologically and emotionally in the peers group. Classrooms settings don't favor learners with physical impairment and they are less interested with the educations. School administration should organize system to maintain the students with disabilities with others. School staff should be given special training relating treatment of learners with disabilities (Milson, 2006).

2.2. Empirical literature

In this study we had to see the practical literature that has been in vogue on the concept of inclusive education related to the physically impaired students (CRPD, 2014). Empirically and critically, inclusive education is practiced in the schools and general community on the main understanding of inclusiveness and more principles and approaches to learn inclusive phenomenon Michell et al., (2005). This empirical Research gives an opposing and long-winded image of different views of researchers on what inclusion is and about how inclusion is practiced.

2.2.1 Teachers attitudes towards inclusive education of physically disabled students

Research findings point out those classes, teacher's attitude towards inclusive education in the monitoring, evaluation and creating inclusive schools. Richmond et al, (2013). However, evidence also suggests that classroom teachers are reluctant about implementing inclusion and adopting instruction for all students (Norwich, 2002). In addition to schools level factors, factors at the classroom level also influence impact of inclusive education.

Norwich (1994) and Parasuran (2006) argued that teachers mindset about inclusive policies are possible to impact their participation for implementation policy. Research show that teachers attitude increased their inclination for accommodating students with specials needs although negative perceptions would hinder to participate socially and to raise the learners' academic performance with special needs in teaching and learning (Sharma, 2005). Based on analysis done on the American perceptions. Scrugy and Mastropieri (2010) stated that school administration had general detained good behaviors towards mindsets of inclusiveness, they were lowly cheerful about degrees to which they were adequate and prepare learners with specials needs for inclusive educations implementation and these should be associated with teachers lack of teaching experience, limited knowledge, and large class size (Dowing, Eichinger & millions, 1997). Another review of literature was carried out by Norwich (2002) on teachers' attitude studies in different countries from 1984 to 2000. The results showed the consistent influence of the nature of the students' disabilities on teachers' attitudes across countries and cross time of studies. Teachers' attitudes were less positive towards the integration of students with physical disability problems and attitudes become less positive as the severity of the disability increased. They were willing to accommodate students with mild disability or physical impairments. Teachers held that children involved in the normal classrooms must have parallel physical features as learners (Singal & Rouse, 2003). Particularly, Mushoriwa (2001) stated that teachers attitudes towards physically impaired students and findings revealed that majority of teachers are not trained and committed to the students with physical disabilities, those Results are reinforced by wilkins and Nietfeld (2004) who find that negative views from teachers affect students with disabilities and Chhabra & Srivastava (2010) who found that teachers are not committed with students with physical disabilities. All respondents for this research tend to show that students with disabilities are not fitting to the normal class environments and research done by the Charema (2010) and Lifshitz, Glaubman and Issawi (2004) revealed that teachers who indicated more commitment towards students with physical disabilities did not perform the same care to the children with disabilities to enhance school resources enjoyment difficulties, this may be expressed the details on job satisfaction and their commitments because it is clear that the teachers are paid higher than others where teachers have same job and same qualification (McConkey & Bradley 2008).

2.2.2 Infrastructure for inclusive education

Consider researches done on the role of school resources (UNESCO,2014) and Save the children (2002) where it they revealed that most of school do not have classrooms ,laboratories, playgrounds to support the children with disabilities and considering curriculum covering what to be taught rather than what learners want to attend based on their needs and appropriateness of the infrastructure. Anova (2011) stated that disabilities is a big issues made worse by lacking of resources and facilities, lacking of specialized trained teachers, large class size, unstructured environments.

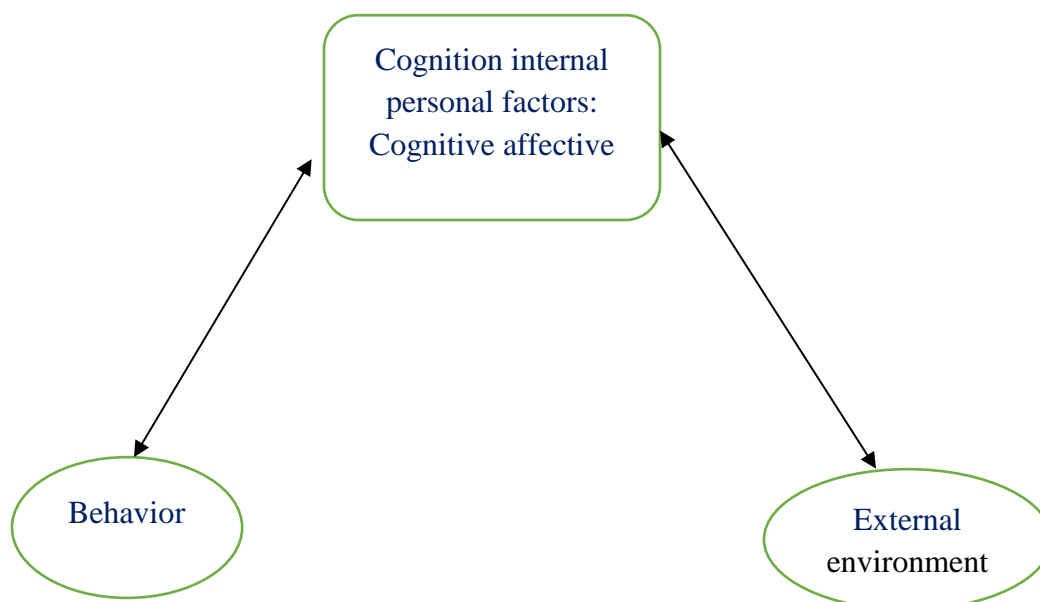
This is why in report done by save the children (2002) target that they are not just issues of orienting the students with disabilities in the schools environments but transforms learning and teaching contents and entirely school community to be reactive to every learners needs. Research carried out at the institute of education, London, England in 2002 by Helen Clark who indicated that the school infrastructure should respect students with disabilities and schools founders should be communicated on how to open up schools infrastructures to the whole communities and the importance of the physical school resources for the inclusions of students with special needs and disabilities (Helen, 2002)

In Rwanda, the report of the Ministry of Education (2018), revealed that most of the schools including Higher Learning Institutions are yet to adhere fully to the accessibility standards. Standard ramps, toilets adapted with standardized supportive rails and space; landmarks and clear walkways and others, are not necessary part of all teaching, learning environments.

Learners with special education needs still face obstacles on their way to and from school that includes long distances to and from school, non-adapted transport systems, ragged terrain and others. This situation contributes to the high rate of school dropout.

2.3. Theoretical framework

This study was supported by three theories which are the following: Social cognitive theory, the theory of Totally Integrated Education (TIE) and social learning theory. As we talk of inclusive education, the three theories fit the context of Rwanda and the context in which the study was done on Bugesera schools. First of all, the social cognitive theory, according to Albert Bandura (1986) stipulates that the general contention in humanity cognitions are expressed by interrelationship, internals factors in all forms cognitively, affectively and biologically events behaviors and environmental event as the figure 1 shows.



Researcher, 2022

Figure 1: Interaction between cognition, behavior and environment

At the second level, we consider the total integrated education theory. it stated that the mental structures described by students are predicted to be strong where known that one, knowhow and know that are integrated with students with emotion and intention which automatically linked with mental structures which expected to be less vulnerable to be forgotten (Dewery,1989).

Finally, the social learning theories were used on teaching and learning that occurred socially. It considered that people took knowledge from person to another with inclusion of one concept as learning by observation, imitations and modeling (Bandura (1986). The three theories related to learning supported this study such that they were able to link inclusive education and learning that is experienced in class. The idea of integration is very crucial here as it focuses on the idea of inclusion focused upon in this research. As this research was based impact of teaching and learning barriers in inclusive education for physically impaired students on their academic performance and those theories supported this study by accepting the cognitive behaviors for physically impaired learners and help students, parents and teachers to tolerate all issues of physically impaired learners in a school based on social integration and cognitive.

2.4. Conceptual framework

There is a large series of study variables but in the present, we showed the connection among the variables which was used. Independent variables are also called predictors, as they predicted what were happen and produce the dependent variables that are also called criterion variables. The Intervening variables are the ones that are not easily controlled by the researcher. All of them are summarized in figure 2 below.

Independent variables

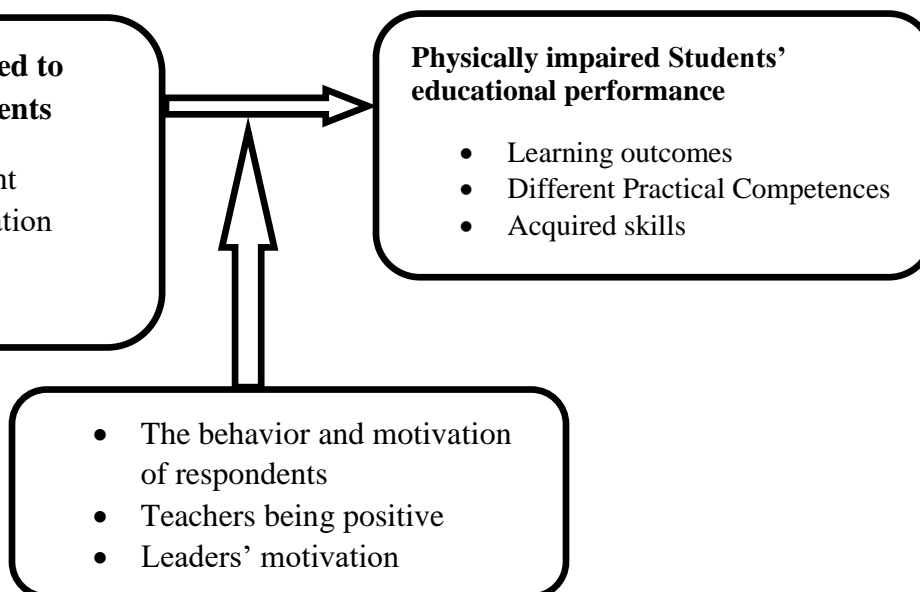
Inclusive education related to physically impaired students

- School management
- Teachers' qualification
- Infrastructure
- Parents' support

Dependent variables

Physically impaired Students' educational performance

- Learning outcomes
- Different Practical Competences
- Acquired skills



Source: Researcher, 2022

Figure 2: Conceptual framework

3.0 Methodology

This part is fundamental in executing the study and it guides the entire research process from planning for data collection to analysis and, finally, presentation. Sections addressed by the chapter include research design, populations both target and sample, techniques for sampling the populations, tools, and methods to be utilized during data collection, the validity and reliability of the entire examination, procedures for analyzing and presenting data, and moral obligations to be observed.

3.1 Study design

This part indicates the blueprint guiding a scientific study and factors in all factors in study variables as well as procedures and analysis methods adopted (Mugenda & Mugenda, 2003). The researcher used the correlation and descriptive research designs. Descriptive design gives a deeper understanding of a phenomenon based on an in-depth study and correlation design facilitate researcher to relate quantitative data and qualitative data. The benefits of description of the study include; subjects or participants are observed in a natural and unchanged environment; the data collection allows for gathering in-depth information that may be quantitative and qualitative through surveys, observations, or case studies in nature (Creswell, 2013). This allows for a multifaceted approach to data collection and analysis. Besides, descriptive studies result in rich data that is collected in large amounts. The research design was descriptive design which is cross sectional research where different categories belong to the similar cluster considered (Bernard, 2012). The researcher used a cross-sectional design to describe teaching barriers in inclusive education for physically impaired students and their academic performance within secondary schools to describe the situation. The importance of cross-sectional designs is that information is

recorded and not manipulated. Correlation survey designs were used to show the nature of the connection between two variables. The researcher used quantitative approach with cross-sectional study design to assess the teaching barriers in inclusive education for physically impaired students and their academic performance in selected secondary schools of Bugesera District, Rwanda.

3.2 Target population

The target populations are any collection of institutions; population which has shared features (Ogula, 2005). The population of this study comprised of 647 respondents from selected secondary schools of Bugesera District and it include 185 teachers, 15 head teachers, 432 students and 15 deputy head teachers in charge of studies.

3.3 Sample design

This part covered the size and techniques of sampling

3.3.1 Sampling Techniques

The Researcher used simple random techniques to choose students, Stratified sampling techniques was used to select teachers. Researcher used purposive sampling to select head teacher and deputy head teachers to make sure the research objective will be attained. These sampling techniques were selected based on the experience, qualities, and awareness in all respondents to provide virtue information (Bernard, 2002).

3.3.2 Sample size

The choice of sample deserves attentive hints in withdrawing from entire group and to provide information that can scientifically be tested (Denscombe, 2008). The number respondents were calculated by using the Yamane formula (1970). This formula involves in calculating the sample size from target population: when the population is 647, the possible sample size is 247 respondents.

$$n = \frac{N}{1 + N(e)^2} \quad \text{Source: Yamane, 1970}$$

N: stands for the target population

e: is the level of precision equals to (5%)

n: Sample size

$$n = \frac{647}{1 + 647(0.05)^2} = \frac{647}{1 + 647(0.0025)} n = 247$$

Table 1: Distribution of target population

Group of respondents	Targeted population	Percentage (%)	Sample size
Teachers	185	28.59	70
Students	432	66.79	165
HTs	15	2.31	6
D/HTs	15	2.31	6
Total	647	100	247

Source: Researcher, 2022

3.4 Data collection methods

<https://doi.org/10.53819/81018102t6008>

Data collection methods are considered as set of strategies used to collect data from different populace to be used for purposive inquiry, it also indicate the logical ways, factual and have a target to attain a detailed objective of the study for resolving a problem targeted (Burns and Grove, 2001). The varied methods was utilized to make the questionnaire and interview constant where the questionnaire were managed and used due to many limitation to integrate the all participants from all chosen public secondary schools such as research time frame, financial constraints, distance from the schools to another in Bugesera district therefore questionnaire methods was utilized to address the limitation above. Other methods that was integrated is interview for school administration due to the availability and responsibility of schools authority, the interview methods was better to manage information from them and this methods is chosen to address the study purpose at time and with valid information from every participants.

4.0 Findings and discussion

This part describe the interpretation, analysis discussion of results of the study and presentation of findings are focusing on each objectives and its answers from each study questions and all finding are represented by using tables, figures and graphs.

4.1 Demographic Characteristics of participants

Individualities of participants are based on gender, working experience, age, educations level and the location of respondents. All participants were classified in three groups which are group of teachers, students head teachers and deputy head teachers including 247 of respondents including 70 teachers, 6 head teachers, 165 students 6 deputy head teachers in charge of studies.

4.1.1 Location of respondents

The researcher classified respondents according to their respective schools and the results are summarized in the table 2.

Table 2: Geographical location of participants

Schools	Frequency	Percent	Valid Percent	Cumulative Percent
G.S Rilima	40	17.0	17.0	17.0
G.S Nyamatacath	31	13.2	13.2	30.2
G.S Rango	53	22.6	22.6	52.8
G.S Nkanga	34	14.5	14.5	67.2
G.S Dihiro	62	26.4	26.4	93.6
G.S Gihinga	15	6.4	6.4	100.0
Total	235	100.0	100.0	

Source: Researcher, 2022

The findings revealed in table 2 show that the 26.4% of participants were from G.S Dihiro, 22.6% of respondents were coming from G.S Rango, 6.4% of respondents were from G.S Gihinga, 14.5% of respondents were from G.S Nkanga, 13.2% of respondents were from G.S Nyamata Catholique and the lastly 17.0% of respondents were from G.S Rilima. Those respondents were selected purposively, randomly and they were selected with respect of the choices and acceptance of the respondents.

4.1.2 Group of respondents

The researcher was interested to indicate the group of respondents and The questions items were addressed to 165 students , 70 teachers and interview for 6 three head teachers and 6 deputy head teachers from secondary schools of Bugesera District and return rate was 235 participants and the rate was 100%, the results are represented in the table 4.2 and the researcher administered the interview with 6 three head teachers and 6 deputy head teachers from secondary schools of Bugesera District and all respondents gave the relevant information required by the researcher, the findings was indicated in table 3.

Table 3: Categories of respondents

Category	frequencies	%	Valid percentages	Cumulative percentages
Teachers	70	29.8	29.8	29.8
Students	165	70.2	70.2	100.0
Total	235	100.0	100.0	

Source: Researcher, 2022

The results indicated in the table 3 revealed that the questionnaires distributed to the 70 teachers and 165 students were all returned and they all managed their questionnaires to the researchers means that the 100% of participants returned their questionnaires which included the 29.8% returning rate of teachers and 70.2% of returning rate of students and researcher managed interview for 6 head teachers and 6 deputy head teachers from secondary schools of Bugesera District, Rwanda.

4.1.3 Gender of Respondents

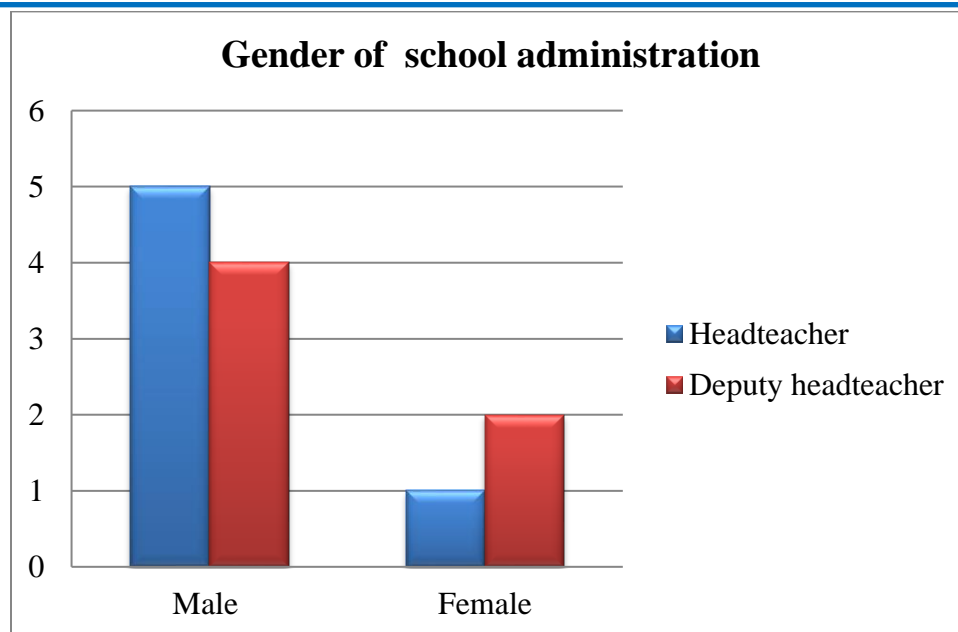
The researcher intended to know if the gender was respected in this study and this was done to ensure the equality in the response given and the findings were indicated in the table 4.

Table 4: Gender of participants

Gender	Freq	%	Valid %	Cumulative %
Female	145	61.7	61.7	61.7
Male	90	38.3	38.3	100.0
Total	235	100.0	100.0	

Source: Researcher, 2022

The gender findings shown in the table 4 revealed that the 61.7% of respondents were females while the 38.3% of participants were males; this indicated that gender equality was respected in this research from the teachers and students. The figure 3 indicate school administration participation was gender sensitive since female and male were involved in interviews therefore 75% of participants were males and the 25% of participants were females.

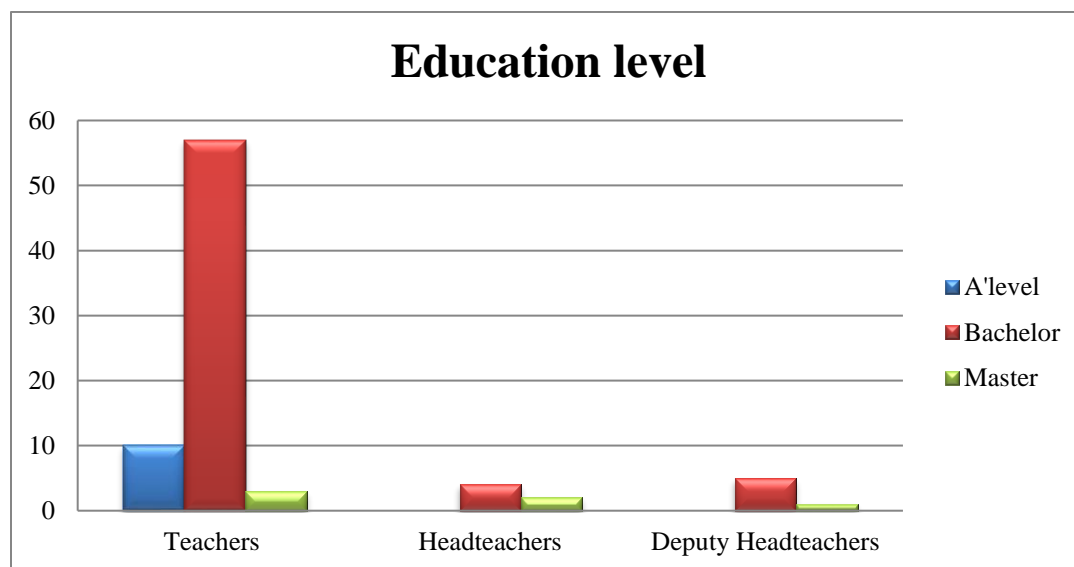


Source: Researcher, 2022

Figure 3: Gender of school administration

4.1.4 Education level of the participants

Profitable works improvement is better enforced through education system and high students' academic performance need more qualified and competent teachers therefore the researcher intended to ensure the participants academic qualification. The findings are shown in the figure 4.



Source: Researcher, 2022

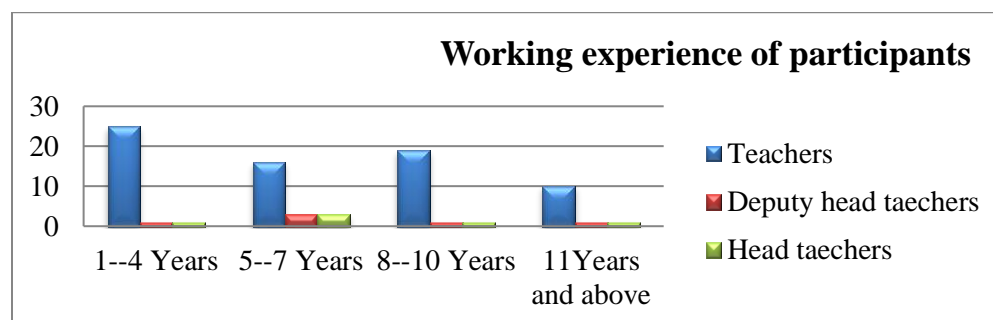
Figure 4: Education level of the participants

The findings highlighted in the figure 4 indicated that majority (57) of respondents teachers were qualified at level of bachelor degree in different areas and 3 teachers have master's degree while 10 of respondents were at Advanced level of secondary schools, 4 head teachers were at bachelor degree and 2 of participated head teachers had masters level, the 5 deputy head teachers had

bachelor degree while one deputy head teacher had master's degree therefore majority of respondents were qualified and competent in education service and were able to provide relevant information about the effect of teaching and learning barriers in inclusive education for physically impaired students on their academic performance in selected secondary school of Bugesera District, Rwanda.

4.1.5 Working Experiences of Participants

The researcher intended to be based on the working experience in the education service and schools administration to ensure how the respondents understand teaching and learning barriers in inclusive education for physically impaired students affect their academic performance therefore the results were revealed in the figure 5.



Source: Researcher 2022

Figure 5: Working experiences of participants

This research was targeted to indicate the working experience of teachers to ensure how they are qualified, competent and experienced and the results are shown in figure 5. It revealed that majorities (35.71%) of teachers were experienced in the range of 1 and 4 years, 22.85% of participated teachers were experienced in the range of 5 and 7 years, 27.14% of participated teachers were in the range of 8 and 10 years, while 14.3% of participated teachers were above 11 years of working experience. Therefore, as results indicated, most teachers were qualified to manage all teaching and learning barriers for physically impaired students towards their academic performance in Bugesera District.

This research also focused on the school staff and researcher highlighted their working experience to ensure if they are aware of how teaching and learning barriers in inclusive education affect students' academic performance, particularly students physically impaired. The findings revealed that 16.6% of deputy head teachers were in the range of 1 and 4 years of working experience, 50.2% of participated deputy head teachers had experienced in the range of 5 and 7 years, and 16.6% of deputy head teachers were in the range of 8 and 10 years of working experience, while 16.6% of participated deputy head teachers were experienced 11 years and above. Also, the research was focused on the working experience of head teachers to ensure anonymity of them about inclusive education and the results indicated in figure 4.3 revealed that majority (50.2%) of head teachers were experienced in the range of 5 and 7 years of working experience, and 16.6% of head teachers also were in the range of 1 and 4 years of working experience, 16.6% of respondents' head teachers were in the range of 8 and 10 years of working experience, while 16.6% of them also were experienced at the level of 11 years and above.

4.2 Presentation of findings for each specific objective

The Main target of this research was based on the impact of teaching and learning barriers in inclusive education for physically impaired students on their academic performance in selected secondary school of Bugesera District, Rwanda . The specific objectives of this research were to identify teaching and learning barriers in inclusive education for physically impaired students in selected secondary schools of Bugesera District, Rwanda, to assess the impact of teaching and learning barriers in inclusive education for physically impaired students on their students' academic performance in bugesera district, Rwanda and to determine the relationship between teaching and learning barriers in inclusive education for physically impaired students and their academic performance . The findings were discussed and presented with the respect of each specific objective.

4.2.1 Teaching and learning barriers in inclusive education

The first objective of this study was to identify teaching and learning barriers in inclusive education for physically impaired students in selected secondary schools of Bugesera District, Rwanda, researcher intended to find out learning and teaching barrier in the secondary schools of Bugesera District , the learning and teaching barriers reveled were based on the accessibility and availability of all resources for inclusive education for physically impaired students and teaching and learning process highlighted in secondary schools to ensure effectiveness and efficiency of learning and teaching in inclusive education to meet all needs of physically impaired students in inclusive education .

i. Resource availability in the inclusive education for physically impaired students

The Researcher wanted to know the availability of resources in the inclusive education for physically impaired students in Bugesera District, Rwanda and the resources focused were the availability of classrooms, dormitories, wash rooms , playgrounds and dining rooms so the finding were summarized in the table 4.4 where the respondents were the combination of teachers and students and they were asked to show the views in form of Likert scale with available and adequate(AA), available and inadequate (AI) and not available.

Table 5: Resources available

Statements	AA Fr	%	AI Fr	%	NA Fr	%
Classrooms availability for disabled students	166	70.6	62	26.4	7	3.0
Dormitories availability for disabled students	59	25.1	23	9.8	153	65.5
Dinning lab availability for disabled students	47	20	183	77.9	5	2.1
ICT Lab availability for disabled students	89	37.9	142	60.4	4	1.7
Wash rooms availability for disabled students	162	68.9	64	27.3	9	3.8
Play grounds availability for disabled students	188	80.0	45	19.1	2	0.9

Source: Primary Data, 2022

<https://doi.org/10.53819/81018102t6008>

The findings revealed that the resources were focused in this research and first resources were classroom availability in inclusive education for physically impaired students, the majority (70.6%) of respondents highlighted that there are available classrooms in inclusive education for physically impaired students in the secondary schools of Bugesera District, the 26.4% of respondents accepted that there are available classrooms in inclusive education for physically impaired students but they are not inadequate for all students needs to reflect their academic performance completely while 3.0% of respondents were disagreed with the statement by showing that there are no available classrooms for physically impaired students in their secondary schools in Bugesera district, Rwanda.

Second facility focused were the dormitories availability in inclusive education for physically impaired students and the findings were indicated in the table 5, the majority(65.5%) of respondents have shown that there are no available dormitories for all students in their inclusive education because their schools are day schools means no dormitories in their school , 25.1% of respondents indicated that there are available and adequate dormitories in inclusive education for physically impaired students while the 9.8% of respondents have shown that their schools have more dormitories but inadequate for physically impaired students noting that those available dormitories are in boarding school of Bugesera District, Rwanda. The third statement was based on how dining room availability in inclusive education for physically impaired students and results show that 77.9% of respondents accepted that they have dining room but are not adequate for the physically impaired students and 20% of respondents accepted that they have dinning and also adequate for every students in their schools including physically impaired students while 2.1% of respondents highlighted that there is no available dining room for students with disabilities in their institutions.

The fourth point of views were based on the ICT lab resources availability in the inclusive education for physically impaired students, the findings indicated that 37.9% of respondents accept the availability and adequacy of ICT lab in the schools and 60.4% of respondents also accepted that there are available ICT lab for physically impaired students but they are inadequate due to schools infrastructure while 1.7% of respondents indicated there are no ICT facility for physically impaired students. The fifth statement of this resources facility availability were based on wash rooms availability for physically impaired students, the results indicated the majority (68.9%) of respondents were accepted that there are available and adequate wash room o for physically impaired students and 27.3% of respondents highlighted that there are available wash facility but no inadequate for physically impaired students while the 3.8% of respondents show that there are no wash room in their schools for physically impaired students.

Lastly researcher wanted to know if the inclusive education for physically impaired students have playground for disabled students therefore the results were that 80.0% of respondents accepted that there are more available and adequate playground facility for physically impaired students and 19% of respondents show they are available playground but inadequate for physically impaired students while 0.9% of respondent indicated that there are no available playground in inclusive education for physically impaired students.

ii. Resource accessibility in the inclusive education for physically impaired students

The researcher intended to know the facility accessibility in the inclusive education for physically impaired students in Bugesera District, Rwanda and the resources focused were classroom

accessibility , dormitories accessibility , wash room accessibility , playground accessibility and dining room accessibility so the finding were summarized in the 4.5 where the respondents were the combination of teachers and students and they were asked to show the views in form of Likert scale with easily accessible (**EA**), difficulty accessible (**DA**) and not accessible (**NA**) as it is indicated in the table 6. The findings revealed that 58.3% of respondent indicated that their classrooms are easily accessible for physically impaired students and 39.1% of respondents also accepted that the school have accessible classrooms for physically impaired students but difficultly for them while the 2.6% of respondent indicated that the classrooms in their schools are not accessible for physically impaired students. Secondly , researcher assessed the dormitories accessibility and the results were that majority(77.9%) of respondents highlighted that there are no accessibility of dormitories because their schools are not boarding schools as it is indicated in the table 4.4 and 16.2% of respondents show that physically impaired students access dormitories easily in their respective schools and 6.0% of respondents indicated they have dormitories but difficultly accessible for the physically impaired students.

Table 6: Accessibility of Resources for Physically Impaired Students

Statements	EA Fr	%	DA Fr	%	NA Fr	%	Mean	St.de
Classrooms accessibility for disabled students	137	58.3	92	39.1	6	2.6	1.4426	0.54684
Dormitories accessibility for disabled students	38	16.2	14	6.0	183	77.9	2.6170	0.74973
ICT Lab accessibility for disabled students	131	98.3	3	1.3	1	0.4	1.6553	2.11939
Dinning lab accessibility for disabled students	135	57.4	100	42.6	0	0	1.4255	0.49548
Wash rooms accessibility for disabled students	182	77.4	38	16.2	15	6.4	1.2894	0.57855
Play grounds accessibility for disabled students	167	71.1	43	18.3	25	10.6	1.3957	0.67367

Source: Primary Data, 2022

The findings indicated in table 6 pointed out about the use of technology where the researcher asked the respondents to show their schools situation about the use of ICT lab and its accessibility for physically impaired students therefore 98.3% of respondents admired that their schools have ICT lab which are accessible easily and 1.3% of respondents indicated that the physically impaired students access the ICT Lab difficultly while 0.4% of respondents show that there are no accessible ICT lab in their respective schools . The results show that there are accessible of dining rooms for physically impaired students where the 57.4% of respondents accepted that their schools have easily accessible dining rooms for physically impaired students and 42.2% of respondents indicated that students take foods at a school and dining rooms are available and accessible for physically impaired students but difficulty for them.

Other statement described how the wash rooms for secondary schools of Bugesera District are accessible for physically impaired students therefore the 77.4% of respondents indicated that wash

rooms are easily accessible and 16.2% of respondents show that the wash rooms are accessible in their schools but accessible difficultly for physically impaired students while 6.4% of respondents highlighted that there are no accessible wash rooms for physically impaired students in their schools , last point were based on how playground are accessible for physically impaired students , findings show that 71.1% of respondents playground facilities are easily accessible for the physically impaired students and 18.3% of respondents mentioned that playgrounds are difficultly accessible in their schools while 10.6% of respondents are no accessible for physically impaired students in inclusive education.

iii. Teaching and learning process for physically impaired students

The researcher wanted to know if there are challenges faced by physically impaired students during teaching and learning process in inclusive schools of Bugesera District, Rwanda. The researcher asked the respondents to show the views as highlighted in the table 4.6 where respondents choose their answers by use of Likert scale of strongly agree (SA), Agree(A), Strongly disagree(SD) , Disagree (D) neutral (N), findings are summarized in the Table 7.

Table 7: Teaching and learning process

Statements	SD Fr	%	D Fr	%	N Fr	%	A Fr	%	SA Fr	%
Teaching aids are available to physically impaired learners	8	3.4	15	6.4	5	2.1	118	50.2	89	37.9
Inclusiveness used in different teaching strategies used by teachers in schools	11	4.7	12	5.1	7	3.0	72	30.6	133	56.6
Schools have libraries , requisites textbooks for learners with disabilities	9	3.8	27	11.5	18	7.7	111	47.2	70	29.8
All schools favor all learners including physically impaired learners	22	9.4	4	1.7	8	3.4	72	30.6	129	54.9
All learners have fundamental skills of enjoying schools features and accept all in the community	4	1.7	7	3.0	6	2.6	129	54.9	89	37.9
There are available specials teaching aids to help physically impaired learners	4	1.7	18	7.7	5	2.1	28	11.9	180	76.6

Source: Primary Data, 2022

Findings indicated that more respondents (88.1%) of respondents were accepted that teaching aids are available for physically impaired learners in their secondary schools and 9.8% of respondents were disagreed with the statement by saying that there are no teaching aids available and accessible to physically impaired students in inclusive education while the 2.1% of the respondents were refused to show their side about availability and accessibility of teaching and learning materials in inclusive education for physically impaired students in Bugesera district, Rwanda

The researcher were focused also on Inclusiveness used in different teaching strategies used by teachers in schools, the results were indicated that majority (87.2%) of respondents agreed that teachers used different teaching strategies in the schools to favor physically impaired students, the 9.8% of respondents said that different teaching strategies used by teachers in schools for all students and 3.0% of respondents were neutral to the statements means they are refused to show

their views if Teaching and learning methods/approaches used by teachers are inclusive in their schools. Researcher wanted to know that if libraries and requisite texts books are adequately accessible and available for physically disabled students and results indicated in table 4.6 show that the majority (77.0%) of respondents accepted that their schools have libraries and requisite textbooks which are adequately accessible, available for physically impaired students while 15.3% of respondents were not aware of libraries and requisite for physically impaired students in inclusive education while 7.7% of respondents were refused to indicate the acceptance of libraries and requisite textbooks are adequately accessible, available for physically disabled students.

The researcher intended to know if All schools favor all learners including physically impaired learners, they are children too, the majority (85.5%) of respondents accepted that their schools are available to all learners including learners with physically impaired students and the 11.1% of respondents were disagreed of how their schools are available for all children including children with physically impaired students and 3.4% of respondents refused to indicate about the availability of their schools to all children including physically impaired children.

The fifth statement were asking if there are available specials teaching aids to help physically impaired students and results indicated that the majority (88.5%) of respondents highlighted that their schools have specials teaching aids to help physically impaired learners and 9.4% of respondents indicated that there are no specials teaching aids to help physically impaired learners means that all students have equal right at school, no particularities for physically impaired students while 2.1% of respondents refused to show their side for answering about There are available specials teaching aids to help physically impaired students.

iv) Motivational barriers for physically impaired students

The researcher was interested in knowing more barriers in teaching and learning process toward physically impaired students and the results indicated that there are motivational barriers as they are indicated in the table 8. Results indicated in table 8 revealed that majority (90.6%) of respondents agreed that teaching and learning approaches are main barriers for physically impaired students and 3.0% of respondents show that they are neutral to the statements while the 6.4% of respondents indicated that teaching and barriers approaches are not barriers for physically impaired students therefore learning and teaching approaches are barriers for physically impaired students.

Also researcher were interested to know if parents participation and community engagement in students' academic activities are also barriers for physically impaired students so the results indicated in table 8 revealed the majority (94.1%) of respondents accepted that they are barriers for physically impaired students and 3.4% of respondents refused to show their views on how community engagement and parents participations are barriers for physically impaired students while 2.5% of respondents disagreed with the statements therefore there is a need of parents participation and community engagement for physically impaired students learning process and progress.

Table 8: Motivational barriers for physically impaired students

Statements	SD		D		N		A		SA	
	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
Teaching and learning approaches	11	4.7	4	1.7	7	3.0	80	34.0	133	56.6
Parents and community engagement	2	0.8	4	1.7	8	3.4	72	30.6	149	63.5
Teachers attitude towards inclusive education	4	1.7	7	3.0	6	2.6	129	54.9	89	37.9

Source: Primary Data, 2021

The third statement highlighted by the researcher was based on teachers attitude towards inclusive where researcher were interested to know if all teachers were trained , skilled, experienced and behave positively in teaching learners with disabilities especially physically impaired students therefore results indicated in table 8 indicated that 92.8% of respondents agreed that teachers attitude can be a barriers to the students with disabilities specifically impaired students and 4.7% of respondents were disagreed the statements means they are not sure how teachers attitude can be a barriers for physically impaired while 3.0% of respondents were neutral for the statements therefore teachers attitude is a barriers for the performance of students with disabilities.

4.2.2 Impact of teaching and learning barriers on academic performance

Second objective of this research was based on the impact of teaching and learning barriers in inclusive education for physically impaired students on their students' academic performance in bug sera district, Rwanda.

i) Teaching and learning barriers and students' academic performance

The researcher focused on different factors to ensure students' academic performance specifically for physically impaired students and results were summarized in the table 9.

The researcher wanted to know about teachers qualification towards inclusive education therefore the teachers' qualification was always a challenge when people talked about students' performance, It was again another issue when researchers need to know if they know what inclusive education related to physically impaired children is.

As seen in table 4.8, it is seen that teachers are aware and know about physically impaired children. Those who were questioned showed that strongly disagree was 1.2% of respondents indicating that teachers does not know what inclusive education related to physically impaired children is and 2.5% of respondents showed that teachers do not know what inclusive education related to physically impaired children is while the majority (95.9%) of respondents indicated that teachers know what inclusive education related to physically impaired children is and the 0.4% of respondents refused to give their ideas about how teachers does not know what inclusive education related to physically impaired children is. The implication of these data is that this impairment is not known by teachers. This implies also that they can read and through lifelong learning and training given to them they can know how to tackle these issues and finally promote education performance.

Table 9: Teaching and learning barriers and students' academic performance

Statements	SD		D		N		A		SA	
	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
Teachers attitude towards inclusive education	3	1.2	7	2.9	1	0.4	188	80.0	46	15.9
Teaching and learning approaches used in class facilitate physically impaired students for better performance.	11	4.7	4	1.7	7	3.0	80	34.0	133	56.6
Teachers know how to engage students by taking into account inclusiveness in students	2	0.8	4	1.7	8	3.4	72	30.6	149	63.5
Regular trainings are conducted in view to promote inclusive education	4	1.7	7	3.0	6	2.6	129	54.9	89	37.9
Infrastructure in schools favors students with Special Education Needs (SEN)	4	1.7	18	7.7	5	2.1	28	11.9	180	76.6

Source: Primary Data, 2021

Second statement was based on how inclusive education related to physically impaired students and if can be seen when teachers are teaching in class .It was seen that these children are many in secondary schools of Bugesera District and many organizations passed by their training teachers on inclusive education by complementing what they had from universities. About inclusive education related to physically impaired children and how it can be seen when teachers are teaching in class. Table 9 shows that show that 6.4% of respondents indicated that they cannot accept whether Inclusive education related to physically impaired children can be seen when teachers are teaching in class and majority (90.6%) of respondents accepted that inclusive education related to physically impaired children can be seen when teachers are teaching in class while 3.0% of respondents were neutral to the statement. This extremism shows that many people among respondents believe that teachers can identify Special Education Needs while teaching but others actually showed that they cannot identify them even elsewhere. Research and collection of raw data on this issue show that many teachers manage to identify students with disabilities but do not do anything to tackle the issue though this is even seen in their schemes of work and lesson plans. The tendency or the finality of this being educational performance, teachers in Bugesera should even try to identify these kids in homes, in village meetings, in the playground etc. Teachers in Bugesera District should go and find them in those different environments that are mentioned in table 9.

Table 9 shows in perspective that at 94.1% of respondents were accepted that teachers know how to engage students with physical impairments, 2.8% of respondents were strongly disagreed that teachers know how to engage students by taking into account inclusiveness in students and while 3.4% of respondents refused to say anything about how teachers know to engage students by taking into account inclusiveness in students this was a factor of success of these students if they can be engaged fully. The visible implication is that many of the respondents prove that teachers know how to engage the SEN and results are educational productivity being positive.

Researcher intended to know if the Regular trainings are conducted in view to promote inclusive education are given to the teachers, students and schools staff and the findings are highlighted that the majority(92.8%) of respondents were accepted that regular trainings are conducted in view to promote inclusive education in Bugesera district and 4.7% of respondents were disagreed with

statement means they said that there are no regular trainings are conducted in view to promote inclusive education while 2.6% of respondents were neutral to the statement means they do not know if regular trainings are conducted in view to promote inclusive education. Apart from doing it in varsities, REB set a mentoring programme where mentor trainers help teachers to handle physical impairments issues in schools. This results into educational performance of students with physical impairments. Inclusive education, as defined in this study, will be solely concerned with learners with physical impairments, those who are sometimes referred to as disabled or handicapped, and the full inclusion of those learners is a central concern of this study.

The challenge of infrastructure was also very crucial in promoting the quality education and academic performance of the physically impaired students. What was remarked in the following table 9 is that many respondents were at extreme where for example they could all affirm that the infrastructure favor the inclusive education for physically impaired students and also the intention from researcher was to understand if the schools Infrastructure in schools favors students with Special Education Needs (SEN) and the findings indicated in table 8 revealed that 88.5% of respondents agreed and accepted that the schools Infrastructure favors students with Special Education Needs (SEN) and the 9.4% of respondents were disagreed with the statements where they show that the schools Infrastructure are not favors students with Special Education Needs (SEN) while the 2.5% of respondents refused to talk anything about school infrastructure.

It is not easy to know the learners academic performance meanwhile learners achievement is appeared in socioeconomic development, psychology and environment factors and also the educations are grown as benefits of different industries with their main target of exploiting profits delivered high qualities of education that deliver well skilled, educated, mannered learners based on the needs and requirement of labor markets. That is why the scopes of the study targeted to know if there are strategies to check out the factors that impact the learners' performance in schools

Here the researcher wanted to see it in terms of parental engagement and how the very parents are engaged in promoting inclusive education in Bugesera district. That is what is being seen in the table 10.

Findings indicated that majority (87.3%) of respondent were disagreed that Parents know what inclusive education related to physical impairment is and 11.9% of respondents mentioned that Parents know what inclusive education related to physical impairment is while 0.8% of respondents were neutral to the statement, also researcher interested to know if the Parents do not know what inclusiveness is, results have revealed that 94.0% of respondents were disagreed that people do not recognize what inclusiveness is and 4.7% of respondents admired that the people do not recognize what inclusiveness is while 3.0% of respondents were refused to show their side. The school general assembly SGA follow up is another issue because 77.0% of respondents indicated that SGA does not a follow up to promote inclusiveness in schools while 15.3% of respondents confirmed that SGA does a follow up to promote inclusiveness in schools and 7.7% of respondents were not aware to respond on how SGA make follow up at schools to promote inclusiveness in schools.

Table 10: Parents engagement toward students' academic performance

Statement	SA		A		N		D		SD	
	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
Parents know what inclusive education related to physical impairment is.	13	5.5	15	6.4	2	0.8	96	40.8	109	46.5
Parents do not know what inclusive education is.	7	3.0	4	1.7	7	3.0	114	48.5	103	45.5
SGA does a follow up to promote inclusiveness in schools.	19	3.8	27	11.5	18	7.7	108	45.9	63	31.5
Head teachers allow parents to oversee how inclusiveness is respected in schools	12	5.1	3	1.2	11	4.6	94	40.0	115	49.1
School General Assembly (SGA) is interested in how students are engaged inclusively.	8	3.4	6	2.5	2	0.8	119	50.6	100	42.7
Parents participation and community engagement towards academic performance for physically impaired students	4	1.7	18	7.7	5	2.1	28	11.9	180	76.6

Source: Primary Data, 2021

The researcher intended to know if the head teachers head teachers allow parents to oversee how inclusiveness is respected to favor the academic performance of physically impaired students in schools and the findings revealed that majority (89.1%) of respondents showed that Head teachers do not allow parents to oversee how inclusiveness is respected in their respective schools and 6.3% of respondents were accepted that head teachers allow parents to oversee how inclusiveness is respected in schools and 4.6% of respondents were neutral to the statement.

Sixth statement were focused on School General Assembly (SGA) is interested in how students are engaged inclusively and majority (93.3%) of respondents indicated that School General Assembly (SGA) is not interested in how students are engaged inclusively and 5.9% of respondents were agreed that School General Assembly (SGA) is interested in how students are engaged inclusively while 0.8% of respondents were refused to say anything about participation of school general assembly towards inclusive education of physically impaired students .

4.2.3 Interviews with Head Teachers and deputy head teachers

Interviews yielded good results it were based on teachers' qualifications and educational officials converged on the fact that teachers who are qualified in education have a good approach to handle the issue of IE whereas those who did not do education have the sufficient knowledge to do that but need to be trained on approaches especially. Parents also come to school for meetings, but we need to engage them I real problems that students with SEN are facing, said the headmaster. For them, educational performance depends on the fact that SEN and IE are catered for in schools of Bugesera district. In interviews given, 80% of the head teachers said that they need to provoke advocacy for the children with the physically impaired students so that they can have buildings that favor their learning and horizontal as well as vertical performance. Teachers focused especially (at 77%) on the identification of those students with such SEN and give them special

support. Though it is there, it must be reinforced. Deputy Head teacher witnessed that qualification of teachers is now good in Bugesera. For them, around 60% have degrees in education but others are still studying in post graduate studies to have qualifications in education. About SGA and parental engagement, they said that they must deploy more efforts in view to have parents really engaged. Up to now around 35% of parents are still neglecting SGA meeting where issues of SEN can be discussed. About infrastructure, they said that efforts are now being conjugated so as to have buildings (classes, dormitories and others) respecting the SEN.

4.2.4 Relationship between learning and teaching barriers and students' academic performance

The next specific objective of this research was to examine the linkage between teaching and learning barriers in inclusive education for physically impaired students and their academic performance especially in inclusive education for physically impaired students in Bugesera district, Rwanda and the findings were indicated in table 10 which the respondents raised the perceptions and understanding of how classrooms accessibility and availability correlate with different students' academic performance in inclusive education . The correlation of classrooms accessibility and availability and students' academic performance in inclusive education was established at first stage and the results are summarised in the table 11.

Table 11: Correlations of classrooms accessibility and availability and students' academic performance

Statements	classrooms accessibility and availability	students' academic performance
classrooms accessibility Pearson correlation	1	.909**
and availability Sig. (2-tailed)		.000
N	235	235
students' academic Pearson correlation	.909**	1
performance Sig.(2-tailed)	.000	
N	235	235

Source: Primary Data, 2022

The results indicated in the table 11 show the perceptions of respondents on the correlation between classrooms accessibility and availability towards the students' academic performance. It was revealed that there was a significant correlation with P- value of 0.000 which is less than 0.05 as level of accuracy therefore there was a very high degree of positive correlation as it is proved by the Karl Pearson correlation coefficients (r) which was 0.909 means that the classrooms accessibility and availability is highly appreciated in the inclusive education for physically impaired students toward their academic performance and the table 12 highlight the correlation between the parents engagement and students' academic performance and the findings are indicated in the table 12.

Table 12: Parents engagement and students' academic performance

Statement		students' performance	academic the parents engagement
students' academic performance	Pearson correlation	1	.800**
	Sig. (2-tailed)		.000
	N	235	235
the parents engagement	Pearson correlation	.800**	1
	Sig.(2-tailed)	.000	
	Pearson correlation	235	235

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

Source: Primary Data, 2022

The results indicated in the table 12 show the perceptions of respondents on the correlation between the parents engagement towards the students' academic performance. It was revealed that there was a significant correlation with P- value of 0.000 which is less than 0.05 as level of accuracy therefore there was a very high degree of positive correlation as it is proved by the Karl Pearson correlation coefficients (r) which was 0.800 means that the parents engagement is highly encouraged to be respected in the students' academic performance. And also the correlation was found to how school infrastructure (dining rooms, wash room & playground) availability and accessibility for physically impaired students in inclusive education influence the students' academic performance, the results are indicated in table 12.

The results indicated in the table 12 show the perceptions of respondents on the correlation between school infrastructure (dining rooms, wash room & playground) availability and accessibility towards the students' academic performance. It was revealed that there was a significant correlation with P- value of 0.000 which is less than 0.05 as level of accuracy therefore there was a very high degree of positive correlation as it is proved by the Karl Pearson correlation coefficients (r) which was 0.852 means that the school infrastructure(dining rooms, wash room & playground) availability and accessibility is highly encouraged to be respected towards students' academic performance specifically for the physically impaired students And also the correlation was found to how school infrastructure(dining rooms, wash room & playground) availability and accessibility facilitate student to perform better in their studies the results are indicated in the table 13.

Table 13: Correlations of school infrastructure availability and accessibility, and Students' academic performance

Statement		Students' academic performance	school infrastructure availability and accessibility
Students' academic performance	Pearson correlation	1	.852**
	Sig. (2-tailed)		.000
	N	235	235
School infrastructure availability and accessibility	Pearson correlation	.852**	1
	Sig.(2-tailed)	.000	
	Pearson correlation	235	235

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

Source: Primary Data, 2022

Table 14: Correlations of ICT Lab availability & accessibility and Students' academic performance

Statements		Students' academic performance	ICT Lab availability & accessibility
Students' academic performance	Pearson correlation	1	.837**
	Sig. (2-tailed)		.000
	N	235	235
ICT Lab availability & accessibility	Pearson correlation	.837**	1
	Sig.(2-tailed)	.000	
	Pearson correlation	235	235

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

Source: Primary Data, 2022

The results indicated in the table 14 show the perceptions of respondents on the correlation between ICT Lab availability & accessibility towards the Students' academic performance. It was revealed that there was a significant correlation with P- value of 0.000 which is less than 0.05 as level of accuracy therefore there was a very high degree of positive correlation as it is proved by the Karl Pearson correlation coefficients (r) which was 0.837 means that the ICT Lab availability & accessibility is highly encouraged to be respected in the Students' academic performance and also the correlation was found to how teaching and learning approaches facilitate the students' academic performance, the results are indicated in the table 15.

Table 15: Correlations of teaching and learning approaches and students' academic performance

statements		Students' academic performance	Teaching and learning approaches
Students' academic performance	Pearson correlations	1	0.870**
	Sig.(2tailed)		.000
	N	235	235
Teaching and learning approaches	Pearson correlations	0.870**	1
	Sig.(2tailed)	.000	
	Pearson correlation	235	235

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

Source: Primary Data, 2022

The results indicated in the table 15 show the perceptions of respondents on the correlation between Teaching and learning approaches towards students' academic performance. It was revealed that there was a significant correlation with P- value of 0.000 which is less than 0.05 as level of accuracy therefore there was a very high degree of positive correlation as it is proved by the Karl Pearson correlation coefficients (r) which was 0.870 means that the Teaching and learning approaches is highly encouraged to be respected by teacher enhance students' academic performance specifically in inclusive education for physically impaired students.

4.2.5 Correlation of variables

This research highlighted two variables which are independents variable and dependents variables where independent variable were teaching and learning barriers in inclusive education for physically impaired students and the dependent variable were students' academic performance of physically impaired students therefore the researcher intended to know how the two variables were correlated and their regression analysis model

The table 16 and table 17 show that teaching and learning barriers in inclusive education for physically impaired students were highly related with students 'academic achievement of physically impaired leaners in schools Bugesra district ,Rwanda therefore it was indicated with the Pearson correlation coefficient(r) of 0.941 which was found with p value of 0.000 of a 2-tailed variables to indicate that they are strongly positively and statistically significant means that the well-dressed teaching and learning barriers in inclusive education for physically impaired students enhance students participation in class of Bugesra district, Rwanda and it were supported with reviewed studies like Hall(2005) who stated that more teaching and learning barriers should be dressed to meet the needs of students success.

Table 16: Correlations of variables

Statements		Students' academic performance	teaching and learning barriers
teaching and learning barriers	Pearson Correlation	1	.941**
	Sig. (2-tailed)		.000
	N	235	235
Students' academic performance	Pearson Correlation	.941**	1
	Sig. (2-tailed)	.000	
	N	235	235

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

Source: Primary Data, 2022

Table 17: Regression analysis Model Summary ^b

Model	R	R Square	Adjusted square	R Std. Error of the Estimate	Durbin-Watson
1	.941 ^a	.886	.885	.44717	.390

a. Predictors: (Constant), Teaching and learning barriers

b. Dependent Variable: Students' academic performance

Source: Primary Data, 2022

The findings also found that all variable are coherent with Students' academic performance of physically impaired students is affected with different teaching and learning barriers in inclusive education specifically for physically impaired students as it is show by the regression analysis model with R Square of 0.886 means that the more strategies to prevent teaching and learning barriers were appreciated to enhance, and promote the Students' academic performance in Rwanda.

5.0 Conclusion and Recommendations

5.1 Conclusion

This research expresses the whole perceptions based on of impact of teaching and learning barriers in inclusive education for physically impaired students on their academic performance in Rwandan secondary schools specifically schools of Bugesera district and as conclusion, all respondents indicated that there is a need of different strategies to prevent teaching and learning barriers in inclusive education for physically impaired students to facilitate the their academic performance. research revealed that there are more teaching and learning barriers in inclusive education for physically impaired students and their academic performance are affected therefore the recommendation were formulated to enhance, promote, facilitate inclusive education enhancement and to raise students' academic performance specifically physically impaired students .The third objective indicated strong positive correlation of teaching and learning barriers in inclusive education for physically impaired students and students' academic

performance and . The general results found that the teachers' qualifications are good and help special education need to pass well but again the role of parents is valuable and must be increased for the betterment of special education need students. The inclusive education played a significant role to increase the students' academic performance.

5.2. Recommendations

With the findings show in chapter four, the recommendation were formulated and addressed to different stakeholders: Government should go ahead advocating for the physically impaired students for the betterment of their academic performance. Ministry of education should organize CPDs for the teachers on how to identify and support the SEN. Government should promote job creation for the SEN students after completion of their education. Rwanda education board and Rwanda TVET board should organize and give trainings and make different campaigns to advocate for the SEN students. Rwanda education board and Rwanda TVET board should look for funds build more schools that favor all learners including the SEN students. Bugesera District should initiate trainings to support the physically impaired students to succeed vertically and horizontally. Bugesera District should raise funds from parents and donors to build more facilities for the physically impaired students. Bugesera District should organize parents meetings and visits to oversee the challenges faced by the physically impaired students. Teachers who are not qualified in education are recommended to attend postgraduate diploma in education program to be fully qualified in education to ensure their knowledge top train physically impaired students in inclusive education

Acknowledgments

My deep sense of gratitude is due to **Dr. MUKULIRA Olivier** for his valuable guidance, collaboration, constructive suggestions, encouragement and his dedication which helped me to come to the successful completion of this work.

Conflicts of Interest

The authors declare no conflicts of interest.

REFERENCES

- AccessSTEM.2014. the Alliance for students with disabilities in Science, Technology, Engineering, and Mathematics. DO-IT, University of Washington, 2002-2014.
- Adoyo, P. O., Odeny, M. L. (2015). Emerging Inclusive education Practices in Kenya: Challenges and Suggestions. *International journal of Research in Humanities and Social Studies*. V. 2. 16. June 2015
- Anova J. A. (2011). *Essential Educational and Social Science Research Methods*. Nairobi, Masola Publishers.
- Bandura, A. (1986). *Self Efficacy. The exercise of Control*. NewYork: W.H. Freeman.
- Bandura, A. (1986). *Social Foundations of Thought and Action*. Englewood Cliffs, NJ. Prentice-Hall.
- Barlett.E (2006). *Leaving college: Rethinking the causes and cures for student attrition*. Chicago:University of Chicago Press.
- Bernard, G. (2012). *Working with parents of children with special needs*.London: Cassell.
- Bhama. (2009). *Class-wide Peer Tutoring: Teaching Students with Mild Retardation in Inclusive Classrooms*. The Council for Exceptional Children.
- Burns, D.&Grove D. (2001). Employers' attitudes towards persons with disabilities in the workforce: Myths or realities? Focus on Autism and other Developmental Disabilities.
- Charema. D. (2010).Procedural facilitators and cognitive strategies: *Tools for unraveling the mysteries of comprehension and the writing process and for providing meaningful access to the general education curriculum*. *Learning Disabilities: Research and Practice*.
- Chhabra.D&Strivasta.A.,(2010).Gordon Craig Archives, International Survey, London: *The Malkin Press*.
- Chubon, R. (2014) Attitudes toward disability: Addressing Fundamentals of Attitude Theory and Research in Rehabilitation Education. *Rehabilitation Education*.
- Creswell, A. (2013). Disability and the transition to adulthood: Issues for the disabled child, the family, the pediatrician. *Current problems in pediatrics*, January.
- CRPD.(2014).Thirty years passed: Trends in general education. In B. L. Johnson (Ed.), *General education in two-year colleges*.San Francisco: Jossey-Bass.
- Denscombe.F.(2008).Promoting access to the general curriculum for students with mental retardation: *A multi-level model*. *Education and Training in Mental Retardation and Developmental Disabilities*.
- Dewery, P. D. (1989). Empirical study of the Americans with Disabilities act:Employment issues from 1990-1994. *Behavioral Sciences and the Law*.
- Dowing, S,Eichinger.U&Million. N. 1997.Parental involvement: Beyond demographics. *International Journal about Parents in Education*.

- Egeberg.D&McConney's, R.(2018).Confronting the Obstacles to Inclusion: *International Responses to Developing Inclusive Education*. London: David Fulton Publishers and Nasen.
- Ejikeme, c. A. (2013). The impact of parental involvement, parental support and family education on pupil achievement and adjustment: A literature review. London: Department of Education and Skills.
- Emerson and Schuster.(2008).Secretariat for the African Decade of Disabled Persons, Southern Africa Regional. <https://doi.org/10.1111/j.1741-1130.2008.00151.x>
- Emerson,.(2008).Editorial: Intellectual disability in a global context. *Journal of Policy and Practice in Intellectual Disability*.
- Firmet, M (2015). Parental involvement and students' academic achievement: A meta- Analysis. Educational Psychology Review.
- GMR, D, A. (2016). Self esteem in special needs children. Building confidence and can-do attitudes. March 15
- Gorter.K.2009. "Factors Contributing to the Students Academic Performance: A Case study of The Islamia University Sub-campus". American Journal of Educational Research.
- Helen.C.(2002). Understanding self-regulated learning. *New Directions for Teaching and Learning*, no. 63. San Francisco: Jossey-Bass.
- Holloway, McConkey, R. (2009).Meeting the training needs of community based
- Jepketer,Kombo and Kyalo (2015). Disability Definition Models, Classification, Schemes and Applications. Handbook of disability studies. Thousand Oaks, C. A Sagepublications 60
- Kothari. H. (2004). Setting the Stage for Success. Assessing the Instructional Environment, Preventing School Failure. 41 (2), 53 – 56 Special Education News. May 10 2014. Enabling Education Network. <https://doi.org/10.1080/10459889709603268>
- Krane et al.,(2016). Do Psychosocial and Study Skill Factors Predict College Outcomes?:A Meta-Analysis *Psychological Bulletin*.
- Kuper, G. A et al (2016). Self evaluation and self concept of adolescents with physical disabilities. American Journal of Occupational Therapy.
- Leod,2014).Social Cognitive theory. In R Vasta (Ed.), *Annals of child development*.Vol.6 Six theories of child development (pp.1-60).Greenwich, CT: JAI Press
- Lessard, Poirier, and Fortin .(2010). Investing in the future: Setting educational priorities in the developing world. Paris: IIEP and Pergamon Press.
- Lifshitz, I, et al., (2004). Discrimination and Stigmatization of physically Disabled Students in a General Educational Environment in Pakistan: A case study. Jourlib Journal
- Lockett N, Cornelius.M& Gray D. (2009). A survey on Activity Patterns and Vocational Readiness of Young Adults with Physical Disabilities. Canadian Journal of Rehabilitation, 4, 17-26.
- Mazooe, P. (2011). The Academic Challenges Facing Deaf Students at Durban University of Technology. Research space. University of Kwazulu, Natal

- McConkey.D&Mariga.M (2008).Building social capital for inclusive education: Insights from Zanzibar. *Journal of Research in Special Educational Needs*.
- Michell. J and James S. (2005).The Learning Experience of Students with Disabilities in Higher Education. A case study of a U K university, Disability and Society.
- Milson, K. (2006). The effects of father involvement: A summary of the research evidence. The F11-O News.
- MINEDUC. (2018). National Special Needs Education Policy Framework. Government Printer. Rwanda.
- MphaleH. (2014).Measurement of attitudes towards persons with disabilities. Disability and Rehabilitation, 22.211-224. <https://doi.org/10.1080/096382800296782>
- Mugenda O. and Mugenda A. (2003). Research Methods. Qualitative & Quantitative Approaches. Nairobi. African Centre for Technology Studies Press.
- Mushoriwa, P. K. (2001). How to Write Quality Research Proposal. Thelley publication
- Mutwol .M, Keitany, R & Benner, A. (2015). Culculating Ordinal Regression Models in SAS and S-Plus. Biometrical Journal.
- Norwich, A. (1994). Early fathers and mother's involvement and child's later educational outcomes. British Journal of Psychology.
- Norwich.M.(2002). *Eyes on the Prize: Teaching Complex Historical Content to Middle School Students with Learning Disabilities*. *Exceptional Children*, pp.264-280.
- Ogula, P. A. (2005) *Research methods*. Nairobi: CUEA Publications
- Parasuran, E.(2006). How college affects students, *Volume 2: A third decade of research*. San Francisco:Jossey-Bass.
- Polit .Y & hunger, V. (1995).*A Long Walk to School: International Research on Inclusive Education across the Life-Span*. Amsterdam: Sense Publishers.
- Rahman.C.(2008). Enrolment, facilities and financial allocation in Lagos higher education: Implications for Quality graduates.
- Richmond.et al. (2013). Validating culturally diverse students: Toward a new model of learning and student development. *Innovative Higher Education*.
- SADPD P. (2012). Regression Models for Ordinal Data. Journal of the Royal Statistical Society.
- SADPD (2012) Secretariat of the African Decade of Persons with Disabilities
- Sailor, et al (2002). "Factors influencing students' performance atUniversitiTeknologi MARA Kedah, Malaysia". Canadian Research & Development Center of Sciences and Cultures:
- Save the children. (2002).The effect of inclusion on non-disabled children: A review of the research. Contemporary Education.
- Scrugy.C&Mastropieri.S (2010).Parental attributions as predictors of involvement and influences of achievement. British Journal of Educational Psychology.

- Shadreck, T. V. (2013). Teaching Self Control through Management and Discipline. Boston Ally and Bacon.
- Sharma.D.(2005).Improving higher education environments for adults: *Responsive programs and services from entry to departure*. San Francisco: Jossey-Bass.
- Simic and Krstic. (2017). *A report on theory and method for the study of literacy development in community colleges*.Technical Report NIE.
- Singal, W&Rouse.M (2003). President's Commission on Excellence in Special Education: *Research Agenda Task Force*. Nashville.
- Ssfasne.P (2015). The influence of parents Education and Family Income on Child Achievement: The indirect role of parental expectations and the home environment. Journal of Family Psychology.
- Talebi, Davodi, and Khoshroo (2015) Designing the Physical Environment. Prezi. Keegan, D. (1986). The Foundations of Distance Education. London. Croom Helm.
- Tanyi J. (2006). Academic Achievement in Self Contained Vs Inclusive Special Education Classroom. State University of New York.
- UNESCO (2014). The Salamanca Statement and Framework for Action on Special Needs Education. Salamanca, Spain.
- UNESCO. (2012) Dissertation and Scholarly Research. Recipes for success. Seattle, WA, Dissertation Success, LLC
- UNICEF .(2011). *Promoting Inclusive Education in Low Income Countries*.
- UNICEF.2015.Young Voices: *young people's views of inclusive Education*. Published by Atlas Alliance.
- Uroni.T&Mazagwa.G. (2014). Parental Involvement in Homework. A review of current Research and its Implications for teaching after school programmes, staff and parent leaders. Harvard family Research Project.
- Venter, M. et al (2012). Theory and Distance education. A new discussion. The American Journal of Distance Education.
- WHO. (2008). Convention on the Rights of Persons with Disabilities.
- Wilkins L.&Nietfeld.T (2004) Family involvement in the educational development of youth with disabilities. Menlo Park, CA:SRI International.
- Yin D. (2005). Inclusion or Illusion of Inclusion: A study of interpreters working with deaf students in inclusive education settings; University of Alberta, Canada.