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The Challenges Affecting the Delivery of Quality Education in Selected Schools in Chavuma Ward, Chavuma Central Constituency Zambia

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Abstract

The delivery of quality education remains a concern in rural Zambia due to inadequate learning materials, teacher shortages, poor infrastructure and overcrowded classrooms. This study assessed the challenges affecting quality education in selected schools in Chavuma Ward, Chavuma Central Constituency, Zambia. A quantitative descriptive cross-sectional survey design was employed, involving 80 respondents comprising 50 learners and 30 teachers and school administrators. Data were collected using structured questionnaires and analysed using descriptive statistics, particularly frequencies and percentages. The findings revealed that inadequate learning materials, teacher shortages and poor infrastructure were the major challenges affecting quality education. Specifically, 66% of learners rated learning materials as very inadequate, while 30% of teachers identified teacher shortages as a major challenge. All respondents acknowledged that these challenges affected learner's academic performance, with 72% of learners reporting effects to a high or very high extent. The major consequences included poor examination results, reduced classroom participation and absenteeism. Respondents suggested providing adequate learning materials, recruiting qualified teachers and improving school infrastructure. The study concluded that resource shortages and poor learning environments undermined quality education in Chavuma Ward. It recommended increased government investment in educational resources, equitable teacher deployment and stronger stakeholder collaboration to improve education delivery.

Keywords: Quality Education, Educational Challenges, Chavuma Ward, Zambia

1. Introduction

1.1 Background of the Study

Education is a fundamental human right and an important driver of socio-economic development. It supports poverty reduction, human capital development, health and productivity, while SDG 4 promotes inclusive and equitable quality education (UNESCO, 2023) [18].

Sub-Saharan African countries continue to face inadequate infrastructure, teacher shortages, overcrowded classrooms, limited teaching materials and insufficient financing, particularly in rural communities (UNESCO, 2022; World Bank, 2020) [17, 22]. In Zambia, government efforts have expanded access and improved teacher deployment, infrastructure and curriculum implementation, but rural schools continue to experience shortages of teachers, learning materials and adequate facilities (Ministry of Education, 2022) [12].

These conditions can affect learner participation, attendance, academic performance and educational outcomes (World Bank, 2018; UNICEF, 2021) [21, 19].

1.2 Statement of the Problem

Although Zambia has expanded access to education through measures such as free primary and secondary education, increased enrolment has placed pressure on school resources, especially in rural areas. Persistent shortages of qualified teachers, inadequate infrastructure and learning materials, overcrowding and socio-economic barriers continue to affect education quality (Ministry of Education, 2022; World Bank, 2020) [12, 22].

There is limited empirical evidence on how these challenges interact and affect teaching and learner performance in specific rural communities4 such as Chavuma Ward. This study Therefore, this study was conducted to assess the challenges affecting

the delivery of quality education in selected schools in Chavuma Ward, Chavuma Central Constituency, Zambia.

1.3 Research Objectives

General Objective

To assess the challenges affecting the delivery of quality education in selected schools in Chavuma Ward, Chavuma Central Constituency, Zambia.

The research objectives are:

1. To establish the key challenges affecting the delivery of quality education in selected schools in Chavuma Ward.
2. To examine the impact of these challenges on learner's academic performance in selected schools in Chavuma Ward.
3. To explore possible strategies to improve the delivery of quality education in selected schools in Chavuma Ward.

1.4 Theoretical frame work

This study was guided by Systems Theory in Education, which views education as an interconnected system in which teachers, learning materials, infrastructure, finance and school leadership interact to influence educational outcomes (Meyer and Norman, 2020) [11].

Systems Theory in Education

The theory explains that weakness in one component can affect other parts of the learning process. In this study, teacher shortages, inadequate materials, poor infrastructure, overcrowding, inadequate funding and management challenges were therefore considered interconnected factors that can influence the delivery of quality education and learner academic performance.

2. Literature Review

2.0 Overview

This chapter reviews literature on challenges affecting quality education, their effects on learner academic performance, and strategies for improvement. Evidence is considered at global, Sub-Saharan African and Zambian levels, with attention to rural schools and the contextual gap in Chavuma Ward.

2.1 Challenges Affecting the Delivery of Quality Education

The literature indicates that quality education is influenced by interconnected factors, including teacher availability and competence, school infrastructure, teaching and learning materials, financing, leadership, learner welfare and socio-economic conditions. At the global level, Darling-Hammond (2017) [5] emphasises the importance of qualified and well-supported teachers, while Blatchford, Bassett and Brown (2011) [2] highlight how overcrowded classrooms can limit individual attention. Inadequate textbooks, laboratories, libraries, classroom furniture, sanitation facilities, electricity and internet connectivity can further restrict effective teaching and learning.

At the Sub-Saharan African level, education systems continue to experience teacher shortages, unequal teacher distribution, absenteeism, limited professional development, poor infrastructure and inadequate learning resources. These challenges are often more severe in rural and remote communities, where poverty, long distances to school and limited access to social amenities affect educational participation. Other concerns include weak school leadership, insufficient monitoring, inadequate inclusive education facilities, climate-related disruptions and limited community resources. UNICEF Innocenti (2024) highlights the importance of equitable teacher deployment, instructional time, learning materials and essential school facilities in improving education quality.

Zambian evidence similarly identifies overcrowding, teacher absenteeism, inadequate learning materials and inequitable teacher distribution as continuing challenges (UNICEF Innocenti, Ministry of Education Zambia and UNICEF Zambia, 2024) [20]. Studies in rural districts also report inadequate professional development, poor conditions of service, insufficient teaching materials, limited laboratories and libraries, weak connectivity, poverty and long distances to school. School leadership, parental participation and learner support can help, but communities with limited resources cannot carry the full burden of school development.

The literature therefore shows that education challenges are multidimensional and mutually reinforcing. However, much of the available research is conducted at national, provincial, district or regional level, creating a contextual gap concerning how these challenges combine in individual rural wards. This study addresses that gap by focusing on selected schools in Chavuma Ward.

2.2 Impact of Challenges on Academic Performance

The literature indicates that challenges affecting the delivery of quality education significantly influence learners' academic performance at global, Sub-Saharan African and Zambian levels. Academic achievement depends on several interconnected factors, including teacher availability and competence, teaching and learning materials, school infrastructure, classroom conditions, learner attendance, parental support and socio-economic circumstances.

Globally, inadequate teaching resources, overcrowded classrooms and poor infrastructure can limit learner participation, concentration and understanding. Darling-Hammond (2017) [5] highlights the importance of teacher competence in improving learning outcomes, while Blatchford, Bassett and Brown (2011) [2] associate large class sizes with reduced individual attention. Similarly, Barrett *et al*. (2019) [1] emphasise the influence of the physical learning environment on learner engagement and educational outcomes. Inadequate textbooks, limited digital resources and insufficient practical facilities can further restrict independent learning and understanding.

At the Sub-Saharan African level, teacher shortages, unequal teacher distribution, poverty and inadequate educational resources remain significant barriers to academic achievement, particularly in rural communities. Kabir (2023) identified disparities in teacher distribution between rural and urban schools in Zambia, while UNESCO (2021) [16] highlighted persistent teacher shortages in Sub-Saharan Africa. Long distances to school, food insecurity, limited electricity and internet connectivity can also affect attendance, concentration and access to learning opportunities.

In Zambia, studies have established that academic performance is influenced by both school-based and household factors. Daka *et al*. (2021) [4] linked learner absenteeism to home and school-related factors, while

Simweleba and Serpell (2020) demonstrated the importance of parental involvement in improving learning outcomes. Muyunda (2022) highlighted the relationship between instructional leadership and academic performance, while Mulenga-Hagane *et al*. (2019) emphasised the value of formative assessment in improving learning. Other studies have identified challenges involving teacher shortages, inadequate learning materials, poor infrastructure, language barriers, limited learner motivation and insufficient support for learners with disabilities.

The literature further suggests that these challenges often reinforce one another. For example, teacher shortages and overcrowded classrooms may reduce individual attention, while inadequate textbooks limit revision and independent study. Long distances and household responsibilities may contribute to absenteeism, resulting in missed lessons and learning gaps. These difficulties can ultimately contribute to poor examination results, reduced classroom participation, low concentration and declining learner motivation.

A key gap is that many studies examine individual factors or broader populations rather than the combined relationship between education-delivery challenges and academic performance in Chavuma Ward. The present study therefore links identified school-level challenges with reported effects on learner performance.

2.3 Strategies to Improve the Delivery of Quality Education

The literature indicates that improving the delivery of quality education requires coordinated interventions addressing teacher shortages, inadequate infrastructure, insufficient teaching and learning materials, limited funding, weak school management and socio-economic barriers. Effective strategies should focus not only on increasing access to education but also on improving teaching quality, learner participation and academic outcomes.

At the global level, important strategies include recruiting and retaining qualified teachers, strengthening continuous professional development, improving school infrastructure, providing adequate learning materials and promoting inclusive education. Darling-Hammond (2017) [5] highlights the importance of teacher preparation and professional development, while UNESCO (2020) [15] emphasises equitable access to quality education and the removal of barriers affecting disadvantaged learners. Other approaches include integrating technology into teaching, improving assessment and feedback, strengthening school leadership, increasing parental involvement and ensuring adequate and equitable education financing.

At the Sub-Saharan African level, strategies focus on reducing inequalities between rural and urban schools through targeted funding, teacher incentives, improved accommodation and better working conditions. UNESCO (2021) [16] emphasises the importance of equitable teacher recruitment and deployment, while the World Bank (2018) [21] highlights investment in school infrastructure. Research by Kabwe (2022) and Nalomba (2016) demonstrates the importance of infrastructure maintenance and stakeholder involvement. Other studies emphasise the need to improve textbook availability, strengthen resource management, expand access to electricity and internet connectivity, and encourage community participation through Parent–Teacher Associations and school committees.

Technology-supported learning can supplement conventional teaching, particularly where textbooks and other educational resources are limited. However, its effectiveness depends on reliable electricity, internet connectivity, suitable equipment and teacher training. Kaumba *et al*. (2021) identified inadequate ICT equipment and poor connectivity as barriers to technology adoption in rural Zambian schools. Similarly, Matafwali and Masaiti (2021) highlighted difficulties learners experienced accessing remote education because of limited electricity, internet access and digital devices. These findings suggest that technology interventions should be accompanied by appropriate infrastructure and technical support.

In Zambia, the government has implemented interventions such as free education, teacher recruitment, infrastructure development, curriculum reforms and the provision of teaching and learning materials. Nevertheless, further improvements are required, particularly in rural and remote communities. UNICEF Innocenti (2025) highlights the need to strengthen teacher recruitment, equitable deployment and retention. Continuous professional development, mentoring, improved working conditions and appropriate incentives can help teachers deliver effective instruction and remain in underserved schools.

Other important strategies include strengthening school leadership, monitoring and evaluation, and accountability. Muyunda (2022) found a strong relationship between instructional leadership practices and learners' academic performance. Similarly, Mulenga-Hagane *et al*. (2019) demonstrated the value of formative assessment in identifying learning difficulties and guiding teaching. These findings support regular classroom supervision, constructive feedback, remedial lessons and the use of assessment results to improve learner performance.

Parental and community participation also contributes to effective education delivery. Parents and community members can support learner attendance, school development, resource mobilisation and the monitoring of school activities. However, studies such as Okitsu and Edwards (2017) indicate that poverty, limited resources and unequal participation can restrict community involvement. Therefore, community contributions should complement rather than replace government responsibility for providing adequate educational resources.

Learner welfare and inclusive education are equally important. Strategies such as school feeding, guidance and counselling, improved water and sanitation facilities, accessible infrastructure and specialised learning materials can help reduce barriers to participation. Studies by Simweleba and Serpell (2020), Chanda and Namunyola (2023), and Muzata *et al*. (2021) highlight the importance of parental support, learner welfare and teacher preparation for inclusive education. These interventions are particularly relevant to disadvantaged learners who may experience additional educational barriers.

The literature further emphasises the importance of evidence-based planning and stakeholder coordination. School management teams and education authorities should use information on teacher availability, learner attendance, academic performance, infrastructure and learning resources to identify priorities. Partnerships involving government, parents, communities and development organisations can help mobilise resources, improve accountability and ensure that interventions respond to actual school needs.

Overall, the reviewed evidence indicates that no single

intervention is sufficient. Sustainable improvement requires coordinated action among government, schools, teachers, parents, communities and development partners, with interventions adapted to local conditions.

2.4 Personal Critique of Literature Review
The reviewed literature provides useful evidence at global, regional and national levels, but much of it focuses on broad education systems rather than specific rural wards. There is also limited empirical attention to the practical perspectives of learners and teachers when identifying locally appropriate improvement strategies.

Although Zambian studies identify teacher recruitment, infrastructure, learning materials, training and community participation as important, more localised evidence is needed on how these interventions respond to the combined challenges experienced by particular schools.

2.5 Establishment of Research Gaps
The review identified contextual, empirical, relationship, practical and local-evidence gaps. Existing studies often examine broad geographical areas or individual challenges, leaving limited evidence on the combined effects of education-delivery constraints in selected schools in Chavuma Ward.

There is also limited evidence directly linking specific school challenges with learner academic performance in this setting and identifying which improvement strategies are considered most appropriate by learners and teachers. These gaps justify a focused empirical study.

The present study therefore contributes local evidence by identifying the major challenges affecting quality education, examining their effects on learner performance and exploring practical strategies for improvement in selected schools in Chavuma Ward.

3. Research Methodology
3.0 Overview
This chapter describes the research design, population, sample, sampling technique, data collection, analysis, ethical considerations and study limitations.

3.1 Research design
The study used a quantitative descriptive cross-sectional survey design. Structured questionnaires collected measurable information on teaching and learning materials, teacher availability and qualifications, infrastructure, classroom conditions, attendance, academic performance and improvement strategies.

3.2 Target population
The target population comprised teachers, learners and school administrators in selected schools in Chavuma Ward because they were directly involved in the teaching and learning process.

3.3 Sample size
The study consisted of 80 respondents: 50 learners and 30 teachers and head teachers from selected schools in Chavuma Ward.

3.4 Sampling technique
Stratified sampling was used to divide respondents into relevant groups and ensure representation of learners, teachers and head teachers (Etikan and Bala, 2017) [6].

3.5 Data Collection Method
Primary data were collected using structured questionnaires administered to teachers and learners. Multiple school visits supported clarification of questions and a high response rate.

3.6 Data analysis
Questionnaire data were entered into SPSS/STATA and analysed using descriptive statistics, including frequencies, percentages, means and standard deviations. Findings were presented in tables, graphs and charts according to the three research objectives.

3.7 Ethical considerations
Ethical procedures protected participant's dignity, privacy and welfare. Ethical clearance and institutional permission were obtained; participation was voluntary; informed consent/assent procedures were followed; confidentiality and anonymity were maintained; and data were securely stored and used for academic purposes (Bryman, 2016; Flick, 2018) [3, 8].

3.8 limitations of the study
The main limitations were language barriers, time and resource constraints, geographical accessibility and possible non-response. The researcher addressed these through clarification, confidentiality assurances and reasonable efforts to reach respondents.

4. Presentation of Findings and Discussion of Results
4.0 Overview
This chapter presents the findings of the study on challenges affecting quality education delivery in selected schools in Chavuma Ward, Zambia. It is organised into two sections: presentation of results and discussion of findings. The results cover respondent characteristics and the three research objectives: identifying key educational challenges, examining their effects on learners academic performance, and exploring strategies for improving education quality. Data were collected from 50 learners and 30 teachers/head teachers at Moses Luneta Secondary School and Chavuma Day Secondary School. The findings are presented using tables, figures, frequencies and percentages, and discussed in relation to existing literature and theoretical frameworks.

4.1 Presentation of Results on Background Characteristics
This section presents the demographic characteristics of the respondents who participated in the study.

4.1.1 Gender of Respondents

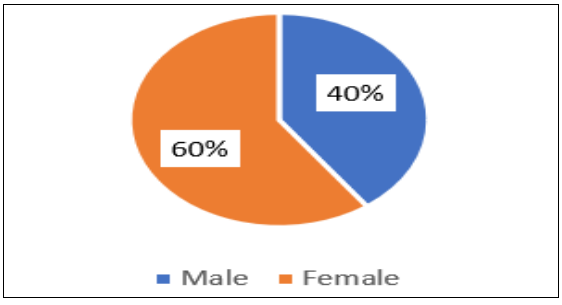

Fig 4.1: Distribution of Respondents by Gender

According to the results presented in Fig 4.1 shows that 60% of respondents were female, while 40% were male, indicating higher female participation in the study. This distribution is consistent with general enrolment patterns in Zambian secondary schools, where female learners constitute a significant proportion of the student population (Ministry of Education, 2019). The inclusion of both genders ensured diverse perspectives on the challenges affecting quality education delivery.

4.1.2 Age Distribution of Respondents

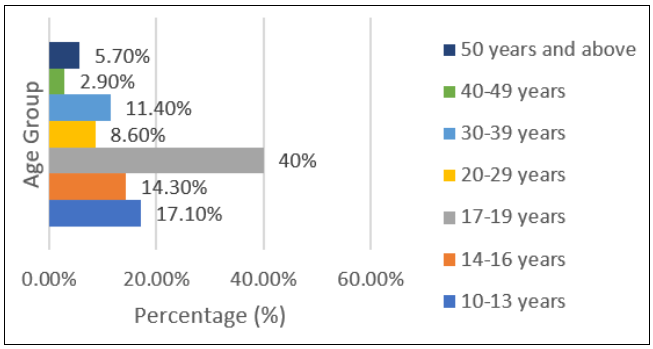

Fig 4.2: Age Distribution of Respondents

Fig 4.2 shows that the largest proportion of respondents (40.0%) were aged 17–19 years, followed by those aged 10–13 years (17.10%) and 14–16 years (14.30%). Respondents aged 30–39 years accounted for 11.40%, while those aged 20–29 years represented 8.60%. Those aged 50 years and above and 40–49 years accounted for 5.70% and 2.90%, respectively. The predominance of respondents aged 17–19 reflects the participation of secondary school learners, while the older age groups represent teachers and head teachers involved in the study.

4.1.3 Grade Level of Learners

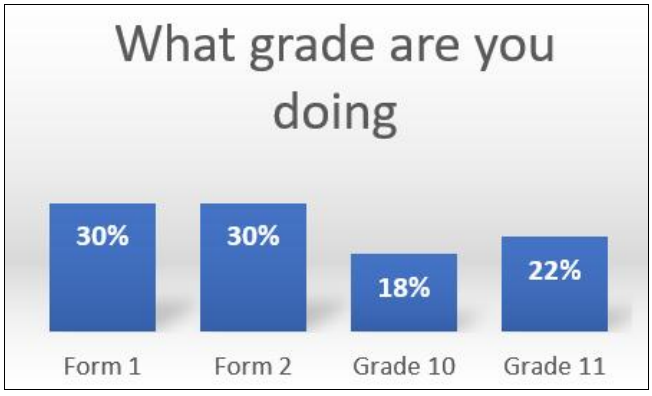

Fig 4.3

Based on the results presented in Fig 4.3 shows that Form 1 and Form 2 learners each accounted for 30% of the respondents, followed by Grade 11 at 22% and Grade 10 at 18%. This distribution ensured representation across different secondary school levels, providing diverse perspectives on the challenges affecting quality education delivery in Chavuma Ward.

4.1.4 Status of Learners

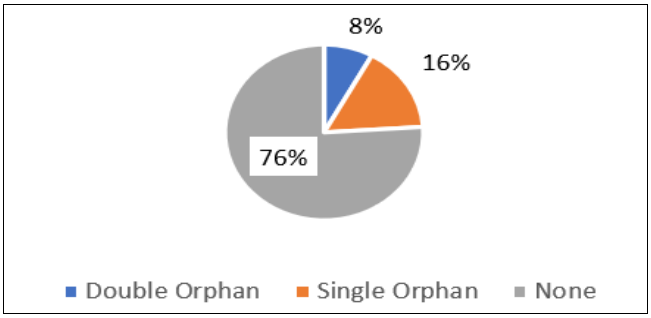

Fig 4.4: Distribution of Learners by Orphan Status

The findings reveal that in Fig 4.4 shows that 76% of learners were not orphans, while 16% were single orphans and 8% were double orphans. Orphan status may affect learner's access to education due to financial constraints, emotional challenges and limited access to basic needs (UNICEF, 2021) [19].

4.1.5 Distance from Home to School

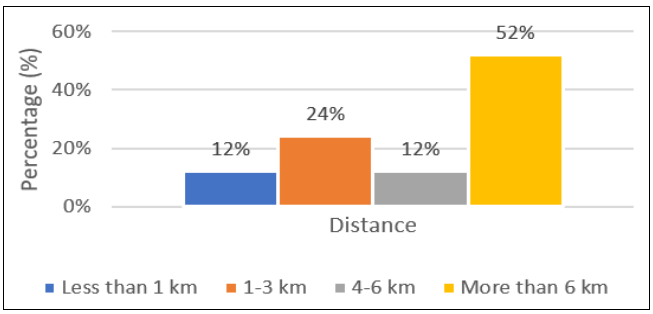

Fig 4.5: Distribution of Learners by Distance from Home to School

Fig 4.5 shows that 52% of learners travelled more than 6 kilometres to school, while 24% travelled 1–3 kilometres. Those travelling less than 1 kilometre and 4–6 kilometres each accounted for 12%. These findings indicate that long distances may affect school attendance and access to education, particularly in rural areas (UNESCO, 2022) [17].

4.1.6 Mode of Travel to School

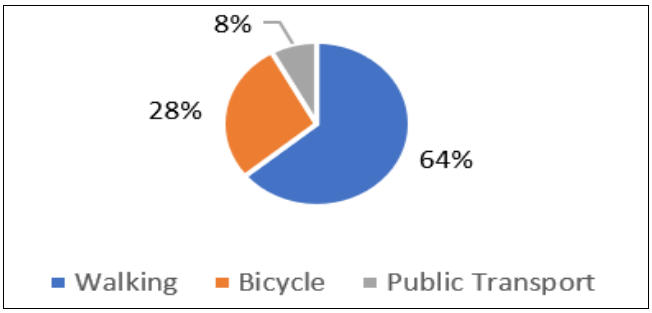

Fig 4.6: Distribution of Learners by Mode of Travel to School

According to the results presented in Table 4.6 and Fig 4.6, the majority of learners (64.0%,) walked to school, while (28.0%) used bicycles and only 8.0% used public transport.

4.1.7 Professional Qualifications of Teachers

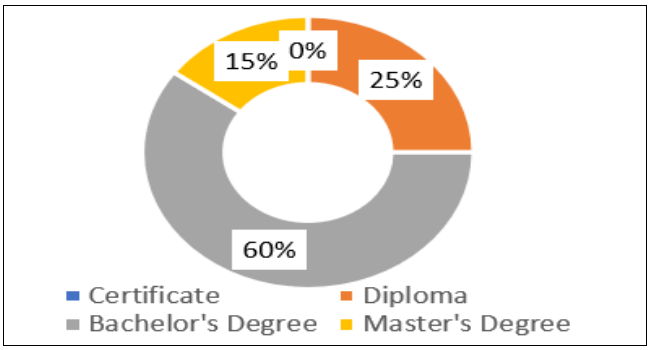

Fig 4.7: Distribution of Teachers by Professional Qualification

According to the results presented in Fig 4.7, shows that 60% of teachers held Bachelor's Degrees, 25% held Diplomas and 15% held Master's Degrees, while none had only Certificate qualifications. These findings indicate that most teachers were professionally qualified, reflecting efforts to improve teacher qualifications in Zambia (Ministry of Education, 2022) [12]. However, further professional development remains important.

4.1.8 Teaching Experience

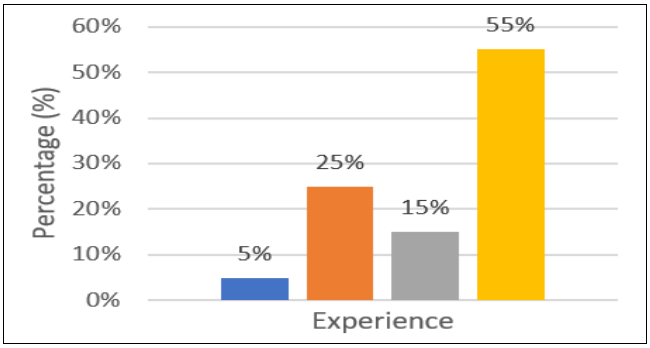

Fig 4.8: Distribution of Teachers by Teaching Experience

The analysis indicates that, in Fig 4.8, shows that 55% of teachers had over 10 years of experience, while 25% had 1–5 years, 15% had 6–10 years and 5% had less than one year. The high proportion of experienced teachers may support effective teaching and classroom management (Darling-Hammond, 2017) [5]. However, the low proportion of newly recruited teachers may indicate difficulties in attracting teachers to rural schools.

4.1.9 Job Titles of Teachers

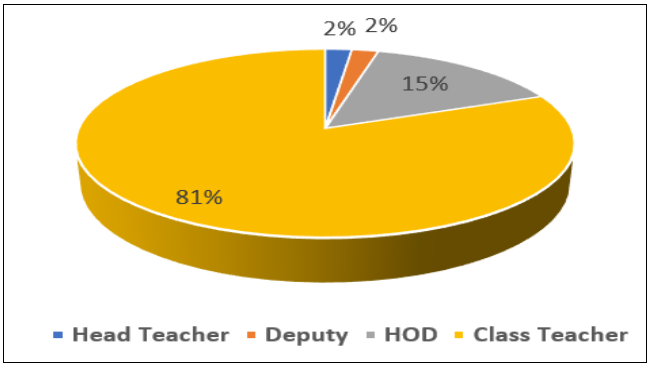

Fig 4.9: Distribution of Teachers by Job Title

According to the results presented in Fig 4.9 show that 81% of teachers were class teachers, 15% were Heads of Departments, while Head Teachers and Deputy Head Teachers each accounted for 2%. This distribution ensured that the study captured perspectives from both classroom teaching and school management.

4.2 Presentation of Results Based on Objective One: Identifying the Key Challenges Affecting the Delivery of Quality Education

This section presents the findings related to the first research objective, which aimed to identify the key challenges affecting the delivery of quality education in selected schools in Chavuma Ward.

4.2.1 Challenges Affecting Quality Education (Learner's Perspectives)

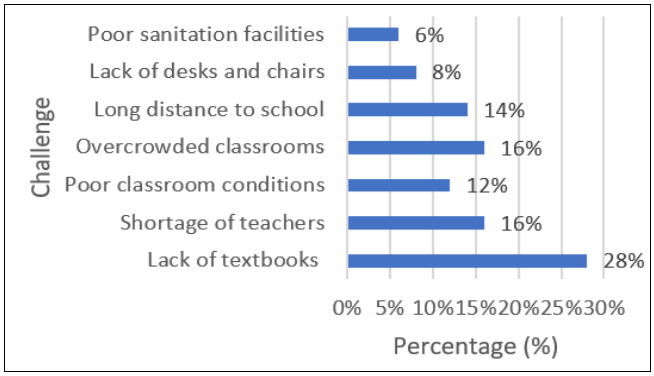

Fig 4.10: Challenges Affecting Learning in Schools

According to the results presented in Fig 4.10, shows that the main challenge affecting learning was the lack of textbooks and learning materials (28%), followed by teacher shortages and overcrowded classrooms (16% each). Long distances to school accounted for 14%, poor classroom conditions 12%, lack of desks and chairs 8%, and poor sanitation facilities 6%.

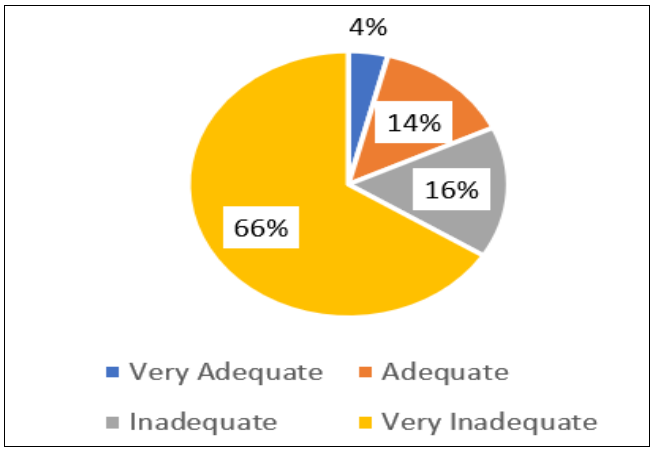

Fig 4.11: Adequacy of Teaching and Learning Materials

The findings in Fig 4.11 shows that 66% of learners rated teaching and learning materials as very inadequate, while 16% rated them as inadequate. Only 14% considered them adequate and 4% very adequate. These findings highlight the shortage of learning materials in the selected schools, consistent with Fig 4.10, where lack of textbooks was the most frequently reported challenge.

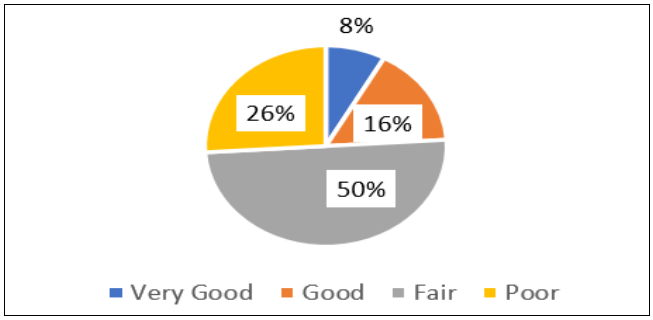

Fig 4.12: Classroom Environment Rating

According to the result presented in Fig 4.12 shows that 50% of learners rated the classroom environment as fair, while 26% rated it as poor. Only 16% rated it as good and 8% as very good. These findings suggest that classroom conditions may hinder effective learning in the selected schools.

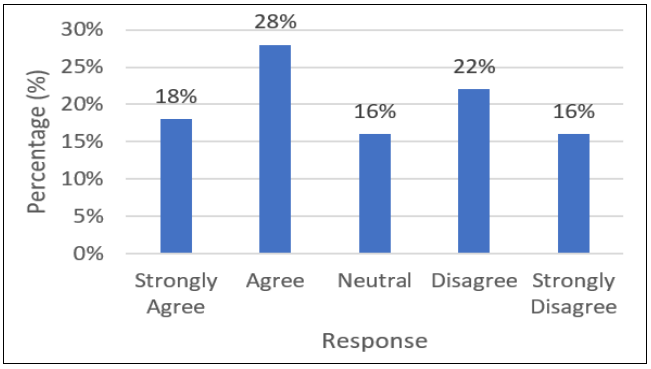

Fig 4.13: Teacher Shortage and Learning

Fig 4.13 shows that 28% of learners agreed and 18% strongly agreed that teacher shortages affected learning. Meanwhile, 22% disagreed, 16% strongly disagreed and 16% were neutral. These findings indicate that teacher shortages affect learning, although learners may also experience other challenges, such as inadequate teaching and learning materials.

4.2.2 Challenges Affecting Quality Education (Teacher's Perspectives)

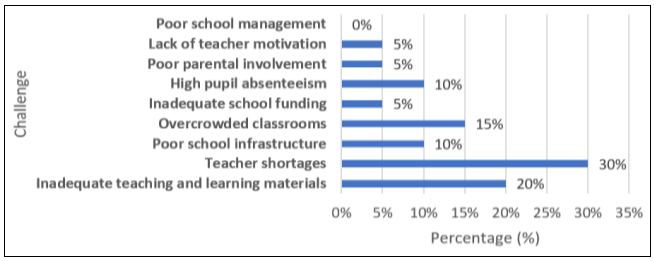

Fig 4.14: Challenges Affecting Quality Education (Teachers)

According to the results presented in Fig 4.14, shows that teacher shortages were the main challenge reported by teachers (30%), followed by inadequate teaching and learning materials (20%) and overcrowded classrooms (15%). Poor infrastructure and pupil absenteeism each accounted for 10%, while inadequate funding, poor parental involvement and low teacher motivation each accounted for 5%. No teachers identified poor school management as a challenge.

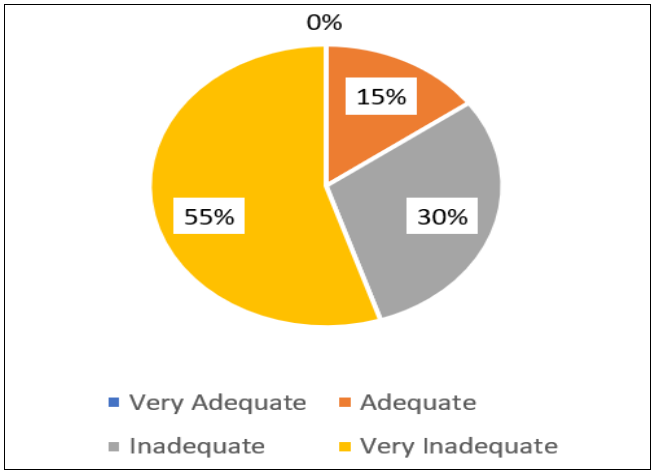

Fig 4.15: Adequacy of Teaching and Learning Materials (Teachers)

Fig 4.15 shows that 55% of teachers rated teaching and learning materials as very inadequate, while 30% considered them inadequate. Only 15% rated them as adequate, and none rated them as very adequate. These findings confirm that inadequate teaching and learning materials are a major challenge in the selected schools, consistent with learners responses.

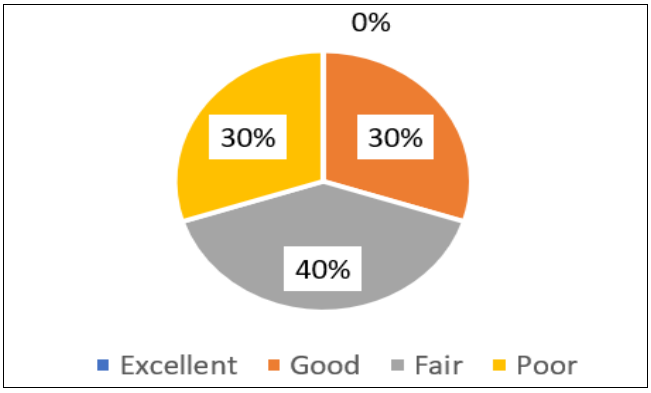

Fig 4.16: School Infrastructure Condition

Fig 4.16 shows that 40% of teachers rated school infrastructure as fair, while 30% rated it as good and another 30% as poor. None rated it as excellent. These findings indicate that infrastructure remains a challenge in some selected schools, potentially affecting the delivery of quality education in Chavuma Ward.

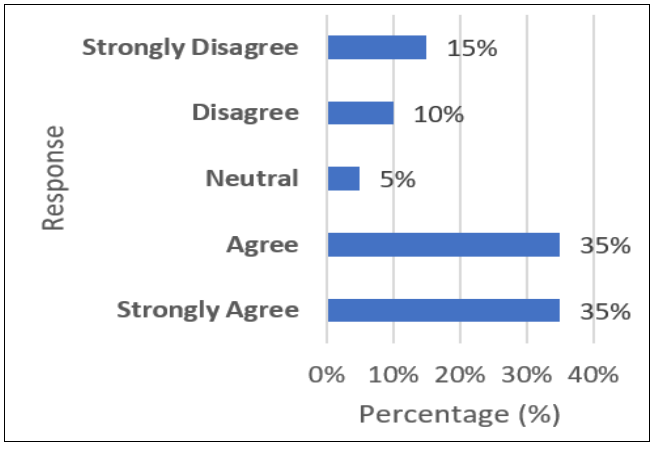

Fig 4.17: Teacher Shortage and Teaching/Learning

The findings revealed that in Fig 4.17 shows that 35% of teachers strongly agreed and 35% agreed that teacher shortages negatively affect teaching and learning. Meanwhile, 15% strongly disagreed, 10% disagreed and 5% were neutral. These findings indicate that teacher shortages are a major concern, although perceptions may vary across schools.

4.3 Presentation of Results Based on Objective Two: Examining the Impact of Challenges on Learner's Academic Performance

This section presents the findings related to the second research objective, which aimed to examine the impact of the identified challenges on learner's academic performance in selected schools in Chavuma Ward.

4.3.1 Learner's Perspectives on the Impact of Challenges

Table 4.19: Do Challenges Affect Learner's Academic Performance? (Learners)

Response	Frequency	Percentage (%)
Yes	50	100%
No	0	0%
Total	50	100%

Based on the results presented in Table 4.19, all learners (100.0%,) affirmed that the identified challenges affect their academic performance.

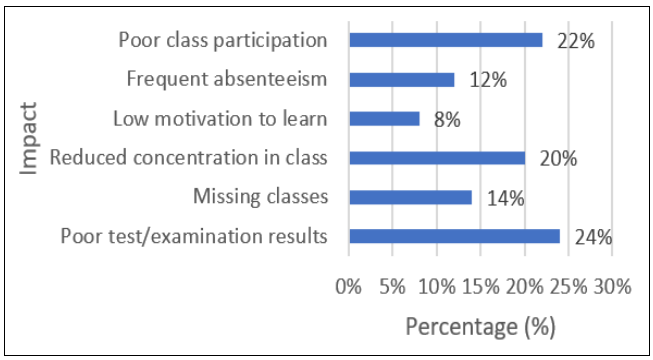

Fig 4.18: Impact of Challenges on Academic Performance

According to results in Fig 4.18 shows that poor test and examination results were the most reported impact of educational challenges (24%), followed by poor class participation (22%) and reduced concentration (20%). Missing classes accounted for 14%, frequent absenteeism 12%, and low motivation to learn 8%. These findings indicate that educational challenges negatively affect learner's academic performance, participation and concentration.

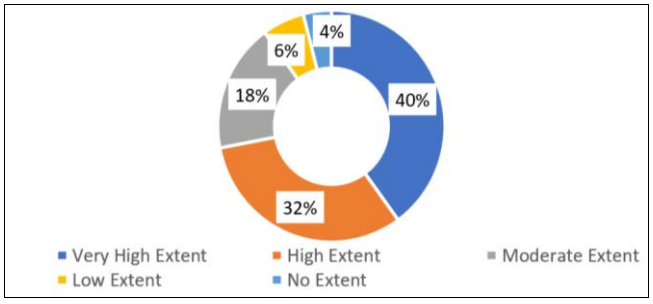

Fig 4.19: Extent of Impact on Academic Performance

The results demonstrate that in Fig 4.19 shows that 40% of learners reported that educational challenges affected their academic performance to a very high extent, while 32% indicated a high extent. Another 18% reported a moderate extent, 6% a low extent and 4% no extent. These findings indicate that educational challenges substantially affect learner's academic performance in the selected schools.

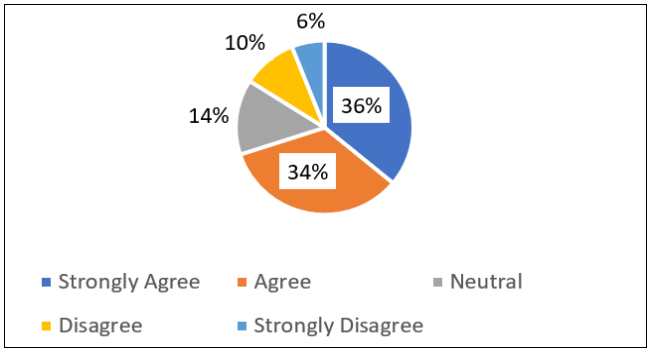

Fig 4.20: Inadequate Materials and Learner Performance

According to the results presented in Fig 4.20 shows that 70% of learners agreed or strongly agreed that inadequate teaching and learning materials affected their academic performance. Meanwhile, 14% were neutral, 10% disagreed and 6% strongly disagreed. These findings highlight the importance of adequate teaching and learning materials in improving learner's academic achievement.

4.3.2 Teacher's Perspectives on the Impact of Challenges

Table 4.23: Do Challenges Affect Learner's Academic Performance? (Teachers)

Response	Frequency	Percentage (%)
Yes	20	100%
No	0	0%
Total	20	100%

The results demonstrate that, in Table 4.23, all teachers (100.0%,) affirmed that the identified challenges affect learner's academic performance, consistent with the learner's responses.

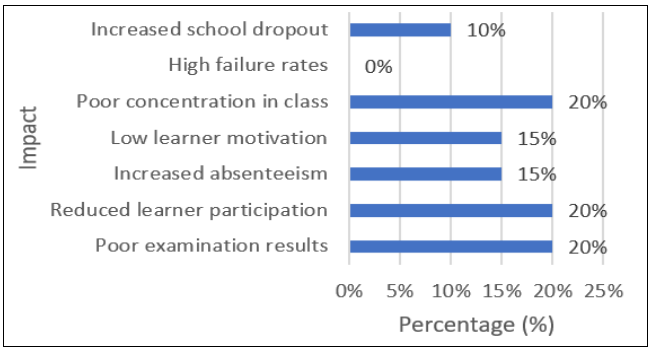

Fig 4.21: Impact of Challenges on Academic Performance (Teachers)

Based on the results presented in Fig 4.21 shows that poor examination results, reduced learner participation and poor concentration were the most reported impacts, each accounting for 20% of teachers' responses. Increased absenteeism and low learner motivation each represented 15%, while school dropout accounted for 10%. No teachers

identified high failure rates, suggesting that other effects were perceived as more immediate concerns.

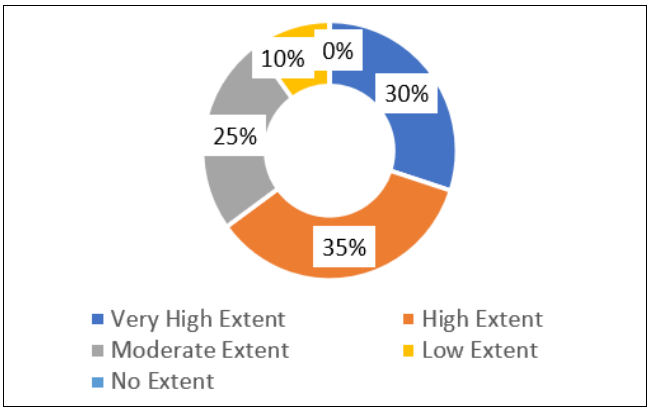

Fig 4.22: Extent of Impact on Academic Performance (Teachers)

Fig 4.22 shows that 35% of teachers reported that educational challenges affected learner's academic performance to a high extent, while 30% indicated a very high extent. Another 25% reported a moderate extent and 10% a low extent. None reported no effect, confirming that educational challenges significantly affect academic performance, consistent with learner's responses.

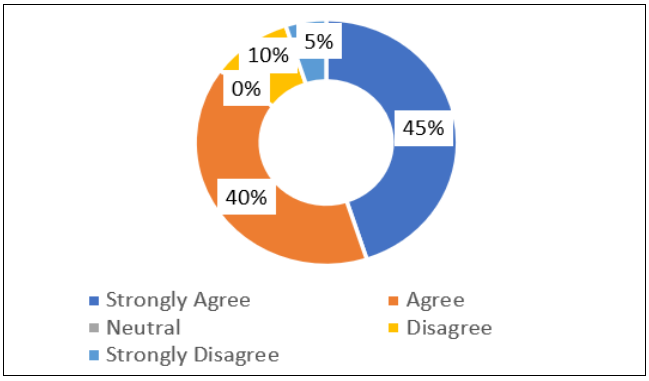

Fig 4.23: Inadequate Materials and Learner Performance (Teachers)

The results demonstrate that, in Table 4.26 and Fig 4.23 show that 85% of teachers agreed or strongly agreed that inadequate teaching and learning materials affect learner's academic performance. Meanwhile, 10% disagreed and 5% strongly disagreed, with none remaining neutral. These findings highlight the importance of adequate teaching and learning materials in improving learner's academic performance.

4.3.3 Correlation Between Challenges and Academic Performance

Table 4.27: Correlation Between Challenges and Academic Performance Indicators

Challenge	Poor Test Results (%)	Poor Participation (%)	Reduced Concentration (%)	Absenteeism (%)
Lack of materials	28	22	18	12
Teacher shortages	20	24	20	16
Overcrowded classrooms	18	20	22	14
Poor infrastructure	16	18	20	18
Long distance	18	16	20	40

The findings reveal that, in Table 4.27, different challenges have varying impacts on specific academic performance indicators.

4.4 Presentation of Results Based on Objective Three: Exploring Strategies to Improve the Delivery of Quality Education

This section presents the findings related to the third research objective, which aimed to explore possible strategies to improve the delivery of quality education in selected schools in Chavuma Ward.

4.4.1 Learner's Perspectives on Improvement Strategies

Table 4.28: Need for Improvements in Schools (Learners)

Response	Frequency	Percentage (%)
Yes	50	100%
No	0	0%
Total	50	100%

According to the results presented in Table 4.28, all learners (100.0%,) agreed that improvements are needed in their schools to provide quality education.

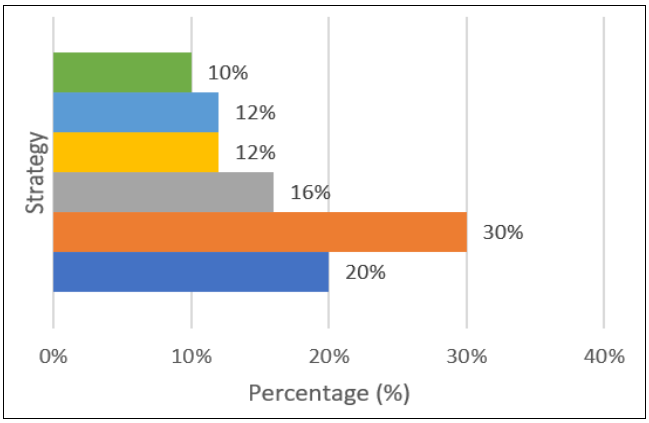

Fig 4.24: Strategies to Improve Quality Education (Learners)

The analysis indicates that, in Fig 4.24 shows that learner's most preferred strategy was providing more textbooks and learning materials (30%), followed by employing more teachers (20%) and improving classrooms and school facilities (16%). Providing desks and chairs and improving sanitation facilities each accounted for 12%, while better learner discipline accounted for 10%. These findings

highlight learner's priorities in addressing inadequate learning materials, teacher shortages and poor school facilities.

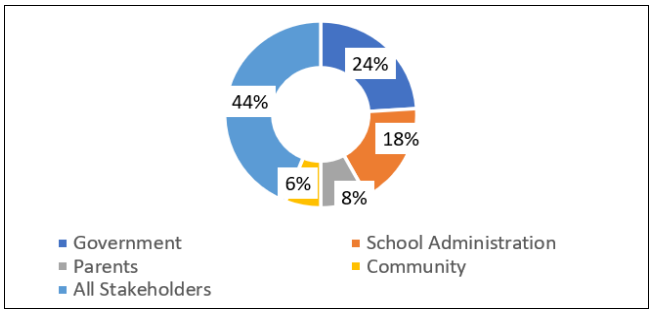

Fig 4.25: Responsibility for Improving Quality Education

According to the results presented in Fig 4.25 shows that 44% of learners believed all stakeholders should be responsible for improving education quality. The government was identified by 24%, school administration by 18%, parents by 8% and the community by 6%. These findings highlight the importance of shared responsibility, particularly the government's role in providing educational resources.

4.4.2 Teacher's Perspectives on Improvement Strategies

Table 4.31

Response	Frequency	Percentage (%)
Yes	20	100%
No	0	0%
Total	20	100%

Based on the findings in Table 4.31, all teachers (100.0%,) agreed that improvements are needed to enhance the delivery of quality education in their schools.

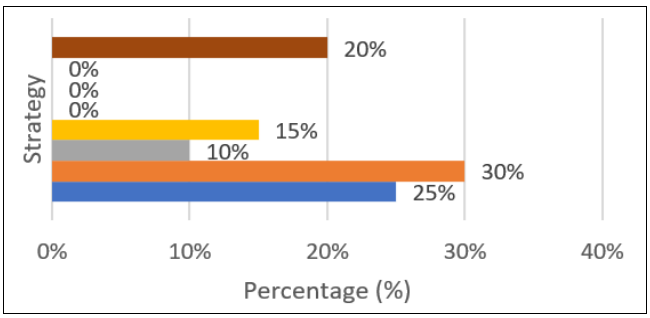

Fig 4.26: Strategies to Improve Quality Education (Teachers)

According to the results presented in Fig 4.26 shows that teachers' most preferred strategy was providing adequate teaching and learning materials (30%), followed by employing more qualified teachers (25%) and improving school management (20%). Increased school funding accounted for 15%, while improving school infrastructure represented 10%. These findings highlight the need to prioritise learning resources, teacher recruitment, effective management and adequate funding to improve education quality, consistent with UNESCO (2020) [15], which emphasises the importance of adequate resources and qualified teachers in delivering quality education.

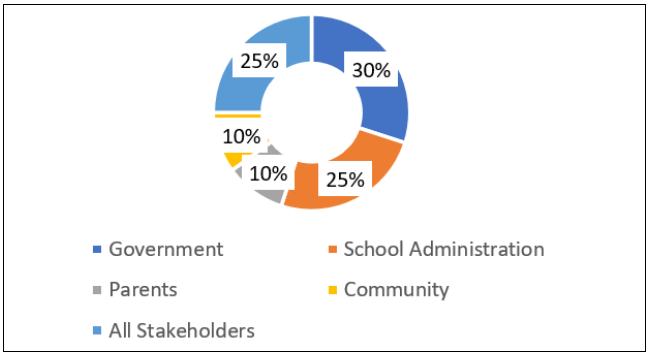

Fig 4.27: Responsibility for Improving Quality Education (Teachers)

4.4.3 Summary of Improvement Strategies

Strategy	Learners (%)	Teachers (%)	Overall (%)
More textbooks/learning materials	30	30	30
More teachers	20	25	22.5
Better classrooms/facilities	16	10	13
More desks and chairs	12	-	12.0*
Improved sanitation	12	-	12.0*
Better learner discipline	10	-	10.0*
Improved school management	-	20	20.0**
Increased school funding	-	15	15.0**

Note: Only learners were asked about desks, sanitation, and discipline.
*Note: Only teachers were asked about management and funding.

4.5 Discussion of Research Findings

This section discusses the findings of the study in relation to existing literature and the theoretical framework that guided the research.

4.5.1 Discussion of Findings on Challenges Affecting Quality Education

The study identified several challenges affecting the delivery of quality education in selected schools in Chavuma Ward. The most significant challenges were the lack of teaching and learning materials and teacher shortages, which were consistently identified by both learners and teachers.

The finding that the lack of textbooks and learning materials was the most frequently cited challenge by learners (28.0%) and one of the top challenges by teachers (20.0%) is consistent with studies that have documented the severe shortage of educational resources in Zambian schools, particularly in rural areas (Ministry of Education, 2022; UNICEF, 2021) [12, 19]. The shortage of learning materials has been shown to negatively affect curriculum implementation and learner engagement, as teachers are unable to provide adequate instruction without appropriate resources (UNESCO, 2023) [18].

4.5.2 Discussion of Findings on the Impact of Challenges on Academic Performance

The study found that the identified challenges have a significant negative impact on learner's academic performance, as reported by both learners and teachers. All respondents (100.0%) affirmed that the challenges affect academic performance, with the majority reporting a very high or high extent of impact (72.0% of learners and 65.0% of teachers).

The finding that poor test/examination results were the most frequently reported impact by learners (24.0%) is consistent with studies that have documented the relationship between resource constraints and academic achievement (Hanushek and Woessmann, 2021) [9]. Learners who lack access to textbooks and learning materials are less likely to perform well in examinations, as they are unable to prepare adequately for tests (UNESCO, 2022) [17].

4.5.3 Discussion of Findings on Strategies to Improve Quality Education

The study identified several strategies to improve the delivery of quality education in selected schools in Chavuma Ward. The most preferred strategies were the provision of more textbooks and learning materials and the employment of more qualified teachers, which were consistently identified by both learners and teachers.

The finding that the provision of more textbooks and learning materials was the most preferred strategy (30.0% of learners and teachers) is consistent with studies that have emphasised the importance of adequate learning resources for effective education (UNESCO, 2023) [18]. Providing adequate teaching and learning materials ensures that learners can access the content they need and that teachers can deliver effective instruction (World Bank, 2020) [22].

4.5.4 Theoretical Implications

The findings of this study have several theoretical implications. First, the study confirms the relevance of the Systems Theory in Education (Meyer and Norman, 2020) [11] for understanding the challenges affecting quality education in Chavuma Ward.

Second, the study extends the Systems Theory by highlighting the importance of contextual factors such as geographical location and socio-economic conditions in shaping educational challenges. The rural context of Chavuma Ward introduces additional challenges such as long distances to school and limited access to public transport, which affect learner attendance and engagement.

4.5.5 Practical Implications

The findings of this study have several practical implications for policymakers, school administrators, and other stakeholders involved in improving education quality in Chavuma Ward and similar rural contexts.

First, the study highlights the urgent need to address the shortage of teaching and learning materials in the selected schools. Policymakers and school administrators should prioritise the procurement and distribution of textbooks, learning aids, and other instructional resources to ensure that learners have access to the materials they need for effective learning.

School Administrators	Strengthen resource mobilisation; improve school management; engage parents and community; address learner well-being
Teachers	Adopt innovative teaching strategies; engage in continuous professional development; support learner motivation; monitor learner progress
Parents and Community	Support learner education; engage with schools; mobilise community resources; advocate for education quality

4.5.6 Unexpected Findings

The study revealed several unexpected findings that merit discussion. First, while teacher shortage was identified as a significant challenge, a notable proportion of learners (22.0%) disagreed that teacher shortages affect learning in their schools.

Second, none of the teachers cited teacher motivation and incentives, increased parental involvement, or teacher professional development as strategies to improve quality education. This may reflect the teacher's perception that the most urgent needs are resource and staffing-related, and that motivation, parental involvement, and professional development are secondary considerations that can be addressed once the immediate challenges are resolved.

5. Conclusion and Recommendations

5.0 Overview

This chapter presents the conclusions and recommendations based on the study findings.

5.1 Conclusion

The study assessed challenges affecting quality education, their effects on learner academic performance and strategies for improvement in selected schools in Chavuma Ward.

5.1.1 Conclusion on Challenges Affecting the Delivery of Quality Education

The main challenges were inadequate teaching and learning materials, teacher shortages, overcrowded classrooms, poor infrastructure, long distances to school and poor sanitation. These constraints interact and reduce the capacity of schools to provide effective learning.

5.1.2 Conclusion on the Impact of Challenges on Learner's Academic Performance

All learners and teachers reported that the identified challenges affect academic performance. Major effects included poor test/examination results, reduced participation and concentration, absenteeism and low motivation.

5.1.3 Conclusion on Strategies to Improve the Delivery of Quality Education

The preferred strategies were provision of textbooks and learning materials, recruitment of qualified teachers, infrastructure improvement and stronger stakeholder involvement. The findings support a comprehensive, multi-stakeholder approach consistent with Systems Theory in Education.

5.1.4 Overall Conclusion

Quality education in Chavuma Ward is constrained by interconnected resource, staffing, infrastructure, geographical and socio-economic challenges. Addressing them requires coordinated action by government, schools, teachers, parents and communities.

5.2 Recommendations

The recommendations focus on government, school administrators, teachers, parents and future researchers.

5.2.1 Recommendations to the Government

Increase rural education funding; recruit and equitably deploy qualified teachers; improve classrooms, furniture, water and sanitation; strengthen policy monitoring; and expand school feeding where needed.

5.2.2 Recommendations to School Administrators

Strengthen resource mobilisation and school management, involve parents and communities, supervise teachers and support learner academic, social and emotional well-being.

5.2.3 Recommendations to Teachers

Use learner-centred and innovative teaching methods, participate in continuous professional development, support

learner motivation and regularly monitor progress.

5.2.4 Recommendations to Parents and the Community

Support regular attendance and learning at home, participate in school activities, mobilise community resources and advocate for improved education services.

5.2.5 Recommendations for Further Research

Future studies should examine long-term effects, compare rural schools, assess specific interventions and analyse education policy implementation at school and community levels.

5.2.6 Final Remarks

Improving quality education in Chavuma Ward requires a coordinated approach that strengthens the interconnected components of the education system and responds to local needs. Such investment supports broader socio-economic development, poverty reduction and human capital development.

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