

SCHOOL-RELATED FACTORS INFLUENCING BOY CHILD DROPOUT IN RURAL SECONDARY SCHOOLS: A CASE OF NGABWE DISTRICT, ZAMBIA

George Mulenga¹, Dr. Gondwe Colious²

¹Kwame Nkrumah University, Kabwe, Zambia,

Email: kinggeorgemulenga@gmail.com

Abstract

Despite Zambia's free education policy, boys' dropout rates remain high in rural districts such as Ngabwe, undermining national retention targets and Sustainable Development Goal 4. While girls' education has received substantial policy attention, school-level barriers contributing to boys' dropout remain under-researched.

This study described school-related factors contributing to dropout of boys in three selected secondary schools in Ngabwe District, Zambia. This study was Guided by Bronfenbrenner's Ecological Systems Theory; the study adopted an interpretivist paradigm and qualitative case study design. Data were collected from 18 school- participants who are the headteachers and teachers across Mukubwe, Mumbachala, and Ngabwe secondary schools using semi-structured interviews and focus group discussions. Data were analysed thematically.

Three school-level factors emerged as key drivers of dropout. First, inadequate infrastructure, including insufficient classrooms, desks, and sanitation facilities, created uncondusive learning environments that demotivated learners. Second, long distances to school, exceeding 30 km for many boys, coupled with the absence of boarding facilities for boys, discouraged daily attendance. Third, shortages of qualified teachers, particularly male role models, and limited learning resources reduced boys' engagement and the perceived value of schooling.

School-level conditions significantly shape boys' decisions to drop out in Ngabwe District. Improving rural school infrastructure, providing boarding facilities for boys, and deploying more qualified male teachers are critical priorities. The findings offer actionable guidance for the District Education Board Secretary and school managers seeking to enhance retention of boys in rural Zambia.

Keywords: *Boys' dropout, school infrastructure, teacher shortage, distance to school, rural education, Ngabwe District, Zambia.*

Introduction

Background to the study Education is globally recognized as a fundamental human right and a key driver of economic and social development. The United Nations Sustainable Development Goal 4 (SDG 4) emphasizes inclusive and equitable quality education and lifelong learning opportunities for all

(UNESCO, 2021). In Zambia, despite successive policies to promote access, equity, and quality education (Ministry of Education, 1996), dropout among male learners remains a national concern. In 2022, approximately 113,631 boys dropped out of primary school (Zambia Statistics Agency, 2023). At the secondary level, only 74,375 boys progressed to Grade 10 out of 291,894 Junior Secondary School candidates, representing a progression rate of 47.62% (ZamStats, 2023).

While substantial policy and research attention has been directed toward improving girls' education, school-level barriers contributing to boys' dropout have received comparatively little focus. Yet emerging evidence indicates that structural conditions within schools significantly shape retention. Ngabwe District, located in a remote, resource-constrained region of Central Province, mirrors this national challenge. Schools in the district face acute structural deficits that negatively affect attendance and academic progression. These include inadequate infrastructure such as insufficient classrooms, desks, and sanitation facilities, which create uncondusive learning environments that demotivate learners (Mwanza & Phiri, 2018; UNESCO, 2017). Long distances to school, often exceeding 30 km, coupled with the absence of boarding facilities for boys, further discourage daily attendance (Huisman & Smits, 2009; UNICEF, 2019). Additionally, shortages of qualified teachers, particularly male teachers who serve as role models, result in high teacher-pupil ratios and limited learner support, reducing boys' engagement and the perceived value of schooling (Ministry of General Education, 2017; Ingersoll, 2001; UNESCO, 2018).

Although the government has expanded secondary school places and deployed teaching staff, these efforts have not adequately addressed the specific school-related barriers contributing to boys' dropout rates in districts like Ngabwe (Ministry of Education, 2020). While past research has explored broad socio-economic determinants of dropout, there remains a critical gap in understanding how school-level conditions influence the retention of boys, especially in rural contexts. This study addressed this gap by describing the school-related factors contributing to the dropout of boys in three selected secondary schools in Ngabwe District. The findings aimed to inform school-level and district-level interventions to enhance boys' retention and promote equitable education for all learners in Zambia.

Literature Review

School-Related Factors: School-related factors refer to institutional characteristics that either promote or hinder learners' ability to stay in school and perform well, including teacher quality, infrastructure, school distance, and availability of learning resources (Okumu et al., 2008). These factors are particularly salient in rural settings like Ngabwe District, where underdeveloped school environments can significantly affect boys' retention. UNESCO (2017) emphasizes that inadequate facilities and poorly maintained school environments demotivate learners, increasing absenteeism and eventual dropout. Boys in rural areas are more likely to disengage when schools appear unsuitable for learning (UNESCO, 2017; Earthman, 2004).

School Infrastructure: School infrastructure encompasses physical and organizational structures including classrooms, furniture, sanitation, electricity, libraries, laboratories and playgrounds that support learning (UNESCO, 2010). Adequate infrastructure has been consistently linked to learner retention, academic performance and engagement (Earthman, 2004; World Bank, 2024). Conversely, poor infrastructure can increase dropout rates, particularly in rural contexts where alternatives to schooling are limited (Mwanza & Phiri, 2018).

Empirical evidence fom rural Zambia indicates that inadequate classrooms, ventilation, sanitation and learning materials create uncondusive environments that discourage attendance (Mwanza & Phiri, 2018). The absence of co-curricular facilities, such as sports grounds and vocational workshops,

disproportionately affects boys' engagement, as many are drawn to practical and physical activities (Orodho, 2014; Phiri & Zulu, 2024). Desk shortages further compound the problem, with learners forced to share or sit on floors, reducing concentration and attendance (Ngabwe DEBS, 2023). While support has been provided through Constituency Development Fund and community initiatives, these measures remain insufficient to address structural gaps (Ministry of General Education, 2017). Critically, rural contexts face unique challenges including extreme distances, limited boarding options for boys, and multi-grade teaching arrangements, which amplify the impact of inadequate infrastructure on boys' dropout rates (Huisman & Smits, 2009; UNICEF, 2019).

Teacher-Learner Relationships: Teacher-student relationships refer to the professional and interpersonal interactions between teachers and learners that shape classroom climate and motivation. Pianta (1999) notes that positive relationships are characterized by support, respect, empathy, and effective communication, while negative relationships marked by hostility, neglect, or lack of encouragement push learners away from school. Teacher absenteeism specifically undermines students' trust and motivation, leading them to perceive schooling as meaningless — a strong predictor of dropout in rural communities (UNESCO, 2018).

In resource-constrained rural areas, teacher-student relationships become a primary motivational factor for retention, particularly where parental involvement is limited (Noddings, 1992). However, rural teachers are often overburdened and lack training to manage classrooms or provide psychosocial support (Ministry of Education, Zambia, 2020). Harsh disciplinary practices and perceived favoritism further alienate boys, who report feeling neglected when teachers direct more encouragement toward promoting female education (Mutuma, 2015; Kimu & Steyn, 2013). The shortage of male teachers also removes critical role models for boys, reducing their sense of belonging and aspiration within school (Ingersoll, 2001; Banda, 2018). These relational deficits contribute to boys viewing school as an unfriendly and unwelcoming place, increasing withdrawal.

Curriculum Relevance: A relevant curriculum is defined as educational content that is meaningful, practical, and applicable to the learner's immediate environment and future life (Tyler, 1949). In rural contexts, relevance extends to agricultural knowledge, entrepreneurship, life skills and cultural values that directly benefit learners' livelihoods. When the curriculum fails to reflect these needs, learners perceive education as irrelevant, leading to disengagement and eventual dropout (Chisholm, 2005; Mukuka, 2019). Rural boys face societal expectations to support households through farming, fishing, or small-scale businesses, yet curricula remain largely theoretical and examination-focused with limited vocational or technical content (Chisholm, 2005). This disconnect is documented across sub-Saharan Africa: boys in Kenya's pastoralist regions drop out because livestock management is not integrated into schooling (Somerset, 2018), while South African rural boys report that schooling does not prepare them for immediate employment (Chisholm, 2005). In Zambia, Mulenga (2018) found that boys prioritize practical work over academic learning when curricula lack alignment with local economic activities. The absence of vocational training in agriculture, carpentry, fishing and entrepreneurship thus creates the perception that education is a poor investment of time relative to household labour demands (Mukuka, 2019).

School Resources and Learning Materials Availability of resources: refers to the provision of adequate learning materials, school infrastructure, and trained teachers within the school environment (Mweene,

2020). Inadequate textbooks, laboratory equipment, and teaching aids compromise instructional quality and frustrate learners, increasing the risk of early withdrawal (UNESCO, 2021). Rural schools frequently operate with severe resource shortages, making effective teaching difficult and reducing learner engagement (Mulenga, 2021). These deficits are not merely logistical; they signal to boys that the school environment is ill-equipped to support their learning, contributing to disengagement and dropout (World Bank, 2024).

School Leadership and Administration: Effective school leadership fosters a learning environment that promotes retention through efficient policy implementation, equitable resource management, and a supportive climate (UNICEF, 2020). Weak administrative practices — poor timetabling, inconsistent policy enforcement, and unsupportive disciplinary approaches — contribute to dropout. Harsh discipline such as corporal punishment or humiliation alienates learners rather than reforming behavior, leading to disengagement (Okumbe, 2007). Democratic leadership approaches that emphasize inclusion and collaboration are vital for retention, yet rural schools often lack capacity in participatory governance (Okumbe, 2007). Further, leadership that fails to balance gender priorities creates environments where boys feel marginalized and unsupported, increasing dropout risk (Banda, 2018). Leadership therefore shapes boys' educational experiences: inclusive, responsive administration enhances retention, while weak leadership amplifies withdrawal.

Distance to School: Distance remains one of the most persistent school-level barriers in rural areas. Long and unsafe journeys discourage regular attendance and contribute to dropout, as fatigue, lateness and absenteeism become precursors to permanent withdrawal (Mwanza & Phiri, 2018; Huisman & Smits, 2009). UNICEF (2019) reports that children traveling long distances face higher risks of violence and accidents, further deterring attendance. In rural Zambia, boys are frequently excluded from boarding facilities, forcing daily walks of over 30 kilometres (Ngabwe DEBS, 2023). This exclusion creates a gendered infrastructure gap whereby the school system mitigates distance for girls but not boys (Phiri & Zulu, 2024). Long walks also reduce time for study, intensifying the tension between schooling and other demands on learners' time (Huisman & Smits, 2009). Distance is thus not merely geographical but an institutional barrier embedded in school provision.

Teacher Shortages: Teacher shortage refers to the insufficient number of qualified teachers available to meet learners' needs. In rural areas, this problem is worsened by poor infrastructure and low teacher motivation (Vurayai, 2022). Schools with inadequate staffing suffer from high learner-teacher ratios and poor quality of instruction, reducing meaningful learner engagement (Vurayai, 2022). When teachers are stretched across multiple classes, instructional quality declines and boys are less likely to engage (Ministry of General Education, 2017). The absence of male teachers removes critical role models for boys, further reducing motivation to stay in school (UNESCO, 2021; Ingersoll, 2001). Empirical evidence links teacher shortages to higher dropout: rural schools with high teacher-pupil ratios record earlier school exit for boys than well-staffed schools (Mulambula, 2023; Ministry of General Education, 2017). Teacher shortages thus constitute an institutional barrier that undermines both instructional quality and boys' sense of belonging within school.

Theoretical Framework

This review is grounded in Bronfenbrenner's Ecological Systems Theory (1979), which explains human development as shaped by nested environmental systems. Of these, the microsystem is most relevant here, defined as the immediate setting where the individual directly interacts with key actors and structures. For school-going adolescents, the school constitutes a primary microsystem encompassing classrooms, teachers, administrators, curriculum, and physical infrastructure. Proximal processes within this microsystem — daily interactions between boys and school resources, pedagogy, and management — critically determine educational persistence or dropout. Negative proximal processes, such as exposure to inadequate facilities, unsupportive teaching, or hostile administrative practices, heighten disengagement risk. While wider exosystem and macrosystem factors like poverty and culture matter, this analysis deliberately delimits scope to the school microsystem. This theoretical boundary ensures conceptual focus on factors originating within the school gate that institutions can directly control, aligning with the objective to identify school-related drivers of boys' dropout in Ngabwe District.

Research Gap

Collectively, literature indicates that school microsystems characterised by inadequate infrastructure, teacher shortages, irrelevant curricula, and weak leadership create hostile environments that push boys out of school. However, significant gaps remain regarding rural Zambian contexts. First, most Zambian studies aggregate dropout data for boys and girls or focus exclusively on girls' barriers, leaving boys' school-based vulnerabilities under-theorised (Banda, 2018; Mwansa & Sitali, 2019). Second, existing research is dominated by primary school or urban samples, with scarce empirical attention to how school-related factors operate in rural secondary schools where distances are longer and resources scarcer (ZamStats, 2023). Third, few studies disaggregate school-level variables from home and cultural influences, resulting in fragmented understanding of what schools themselves do to contribute to dropout. Consequently, policy responses lack precision because the specific contributions of infrastructure, teacher quality, curriculum, and school management to boys' dropout remain empirically unclear. This study addresses these gaps by providing localized, school-focused evidence from three secondary schools in Ngabwe District, isolating factors within the school microsystem that influence boys' educational retention.

METHODOLOGY

Research Paradigm: This study was guided by the interpretivist paradigm, which focuses on understanding how individuals make sense of their experiences within specific social contexts. Alharahsheh & Pius (2020) explain that interpretivism assumes reality is socially constructed and knowledge emerges from meanings people attach to their actions and interactions. Unlike positivism, which seeks objective facts, interpretivism prioritises subjective understanding and lived experiences. This paradigm was appropriate because the study explored how boys, teachers, and school administrators interpret school-related conditions influencing dropout in rural secondary schools. By adopting an interpretivist lens, the research captured participants' perspectives on school environments, teacher practices, curriculum relevance, and school management, and how these school-based experiences are understood to shape boys' educational trajectories.

Research Approach: The study employed a qualitative research approach, inherently linked to interpretivism. According to Creswell (2018), a research approach represents the plan and procedures spanning from broad assumptions to detailed methods of data collection. Denzin and Lincoln (2019) describe qualitative inquiry as an interpretive, naturalistic approach to study phenomena in real-life settings, focusing on meanings, opinions, and experiences. This approach was suitable because the study sought to explore subjective experiences of school-related dropout factors rather than measure numerical trends. It enabled in-depth data collection through interviews and document review, allowing identification of patterns and themes within school microsystems. The qualitative approach therefore aligned with the aim of producing contextual understanding of school-level realities in Ngabwe District.

Research Design: Research design serves as a blueprint providing structure and direction from assumptions to methods. Khanday & Khanam (2019) define research design as “a procedural plan adopted by a researcher to answer questions in a valid way.” This study adopted a descriptive qualitative research design. Febrianto (2023) explains that descriptive qualitative design is used when a researcher seeks a comprehensive summary of events in everyday terms without deeper theoretical interpretation. It focuses on describing what participants experience and how they experience it. This design was appropriate because the study aimed to provide an accurate account of school-related factors contributing to boys’ dropout from rural secondary schools as they exist in their real-world context. The design enabled collection of rich, detailed information from purposefully selected participants including learners, teachers, and head teachers through interviews and document review, capturing perspectives on school infrastructure, pedagogy, and management.

Target Population: Kasonde (2013) stated that target population refers to the total environment of interest to the researcher. The target population for this study included boys enrolled in three selected secondary schools in Ngabwe District, Central Province, alongside teachers and school administrators/headteachers from the same schools. This population was selected to provide diverse perspectives on school-based dropout phenomena within the school microsystem. 67 words

Sample Size and Sampling Procedures: Andrade (2020) define sample size as “the number of participants included in a study, which affects reliability and validity.” In qualitative research, focus is on rich, in-depth information rather than large numbers, with data collection continuing until saturation — when no new themes emerge (Creswell & Creswell, 2023). An initial pool of 50 potential participants was identified, including 30 boys, 17 teachers, and 3 head teachers from three purposively selected secondary schools. Schools were selected based on high dropout rates and accessibility. Saturation was achieved with 34 participants, comprising 20 boys, 12 teachers, and 2 head teachers. At this point, repeated patterns regarding school infrastructure, teacher factors, curriculum, and leadership consistently emerged. Criterion-based purposive sampling was employed to select participants with direct knowledge of school-related factors influencing retention: boys who had dropped out or were at risk, teachers with Grades 8–9 experience, and school leaders overseeing attendance and school policies. This approach ensured representation across school stakeholder groups while focusing on first-hand knowledge of school microsystem conditions.

Data Collection Instruments and Procedure: Primary instruments were semi-structured interview guides and document review protocols. Interview guides allowed flexibility to probe school experiences in depth (Kvale, 1996). Questions focused exclusively on school-related conditions: classroom infrastructure, teaching quality, curriculum relevance, timetable, discipline practices, and school management. Documents reviewed included school registers, infrastructure audits, and staff allocation records to triangulate reported school conditions. Data collection occurred after ethical approval from Kwame Nkrumah University and permission from district education authorities. Interviews were conducted in private school spaces to ensure confidentiality. All instruments excluded questions on home, cultural, or economic circumstances to maintain alignment with the study's school-related scope.

Data Analysis: The study employed thematic analysis following Braun and Clarke's (2006) six-step framework. The process began with familiarization through repeated reading of interview transcripts and school documents to understand school-based data. Initial codes were generated capturing segments related to school objectives, such as "leaking classroom," "teacher absenteeism," "exam pressure," and "corporal punishment." Similar codes were grouped into broader themes reflecting school-related factors: infrastructure and distance, teacher shortages and quality, curriculum and assessment, and school leadership. Themes were reviewed and refined to ensure they accurately represented school microsystem data and were distinct from each other. Triangulation was applied (Patton, 2015) by comparing data from boys, teachers, and school records to confirm consistency and reduce bias. Member checking was conducted with participants to validate interpretations of school-based experiences. This approach aligns with interpretivism, emphasizing understanding of participants lived school experiences rather than numerical generalization.

Ethical Considerations and Trustworthiness: Ethical approval was obtained from Kwame Nkrumah University prior to data collection. All participants provided written informed consent, with parental/guardian consent and assent secured for minors. Purpose, roles, and right to withdraw were explained to ensure voluntary participation (Cohen, Manion & Morrison, 2007). Confidentiality and anonymity were maintained: identifiers were replaced with codes, interviews occurred in private spaces, and data were stored in password-protected files accessible only to the researcher. The study adhered to non-maleficence, avoiding distressing questions. Trustworthiness was ensured through credibility: triangulation of boys, teachers, and documents; dependability: audit trail of coding decisions; confirmability: use of direct quotes; and transferability: thick description of school contexts (Lincoln & Guba, 1985).

FINDINGS

This section presents findings on school-related factors contributing to boys' dropout from three secondary schools in Ngabwe District. Data were collected from 34 participants: 20 boys, 12 teachers, and 2 head teachers. Schools and participants were anonymised as B1–B3 and T1–T12, HT1–HT2 for ethical reasons. Findings address the objective: To identify school-related factors contributing to high dropout rates among boys.

Table 1: Demographic Characteristics of participants

Variable	Frequency	Percentage (%)
Age: 13–15 years	14	35.0
Age: 16–18 years	20	50.0
Age: Above 18 years	6	15.0
Form 1 – Grade 9	18	45.0
Grade 10–12	22	55.0

(Source: Field Data, 2025)

School-Related Factors Contributing to Boys' Dropout

Four school-based themes emerged: infrastructure and distance, teacher shortages and relationships, curriculum and learning materials, and school leadership practices.

Infrastructure and Distance: Long distances to school and inadequate physical facilities were the most cited school factors. Participant T3 highlighted: “Many learners walk long distances daily, and the lack of proper classrooms makes learning difficult, pushing some to drop out.” Boys corroborated this, with Boy 6 stating: “When it rains, the roof leaks and we are sent home. We miss many lessons and fall behind.” Participant T16 added: “Overcrowded classrooms and lack of desks reduce motivation. Boys sit on the floor and lose interest.” Document review confirmed that B1 and B2 lacked functioning sanitation blocks, and B3 had a 1:5 textbook ratio in core subjects.

Teacher Shortages and Teacher-Learner Relationships Shortages of qualified teachers and poor teacher-learner interactions emerged strongly. Participant T16 noted: “Teacher shortages and poor teacher-learner relationships reduce motivation and engagement, which leads some boys to drop out.” Boy 11 reported: “Some teachers come once a week. When they are absent, we just play and go home.” Head Teacher HT1 acknowledged: “We have 18 teachers for 900 pupils. Subjects like Mathematics go untaught for weeks.” Punitive discipline was also cited, with Boy 3 stating: “If you come late because of distance, you are beaten. So, I stopped coming.”

Curriculum, Assessment, and Learning Materials: Limited textbooks and perceived curriculum irrelevance contributed to disengagement. Participant T12 explained: “Boys struggle to study effectively because textbooks and learning aids are not enough, especially for those who stay in boarding arrangements weekly.” A teacher from B2 stated: “We share one textbook among five learners in some subjects. This discourages boys from studying.” Boys expressed that the curriculum felt disconnected from their reality. Boy 9 said: “We learn about things we will never use. There is no practical work, so school feels useless.”

School Leadership and Monitoring: Weak administrative practices and poor learning environments were cited. Teachers noted limited supervision of teaching and attendance. Participant T18 observed: “Weak learner monitoring mechanisms mean boys disappear and no one follows up.” Boys reported that school rules were inconsistently applied. Boy 14 said: “The head teacher only comes to assembly. No one checks if teachers are teaching.” HT2 admitted: “We lack funds to maintain dormitories, so boarders sleep poorly and skip class.”

Table 2: Frequency of School-Related Factors Cited by Teachers and Head Teachers

School-Related Factor	Frequency	Percentage (%)
Long distance to school	15	75.0
Inadequate classroom s/infrastructure	14	70.0
Shortage of qualified teachers	12	60.0
Limited textbooks and learning aids	11	55.0
Poor teacher-learner relationships	6	30.0

(Source: Field Data, 2025)

Summary of Findings

Across all school-based respondent categories, strong convergence emerged on four school-related drivers: long distances exacerbated by poor boarding facilities, inadequate infrastructure, teacher shortages and absenteeism, and limited learning materials. Boys emphasized punitive teacher practices and irrelevant curriculum, while teachers and head teachers stressed systemic shortages and weak monitoring. No data on economic hardship, cultural expectations, peer influence, or parent-related factors are reported here, as they fall outside the school microsystem scope of this paper.

DISCUSSION OF FINDINGS

This chapter discusses the study's findings in relation to Objective 1, existing literature, and Bronfenbrenner's Ecological Systems Theory (1979). It critically examines how school-related challenges within the immediate school environment contribute to boys' dropout in secondary schools in Ngabwe District, Zambia. The discussion situates findings within broader Zambian and Sub-Saharan African contexts, identifying areas of convergence and divergence with previous studies. Additionally, the chapter explores practical and theoretical implications at the microsystem level, where microsystem is defined as the school setting, thereby providing a focused understanding of institutional factors affecting boys' educational retention.

School-Related Factors Within the Microsystem

School-level challenges emerged as critical and independent contributors to boys' dropout rates in Ngabwe District. Participants highlighted issues such as poor infrastructure, long distances to schools, teacher shortages, limited learning resources, and weak administrative leadership. These factors operate directly within the school environment and are within the control of school management and District Education Boards.

Bronfenbrenner's Ecological Systems Theory (1979) is applied here with the microsystem defined exclusively as the school. The school microsystem constitutes the immediate setting where boys directly experience classrooms, teacher interactions, curriculum delivery, and administrative practices. Deficits in this setting — leaking classrooms, teacher absenteeism, textbook ratios of 1:5, and inconsistent monitoring — disrupt proximal processes necessary for cognitive and social development. This focused application isolates school-controlled conditions from home and community variables.

Infrastructure and Accessibility

A majority of teachers (75%) and all head teachers identified long travel distances and inadequate infrastructure as key deterrents to consistent attendance. Poor road conditions, particularly during the rainy

season, intensify absenteeism, making daily school attendance physically demanding. Distances greater than 5 km significantly increase dropout risk, consistent with Mwanza and Phiri (2018).

From a microsystem perspective, the physical school environment directly constrains participation. A Grade 9 learner stated: “Sometimes I walk more than an hour to reach school. On rainy days, I stay home because the road is impossible.” Head Teacher HT1 confirmed: “Our dormitory was built for 40 boys but now houses 90. They sleep poorly and miss first period.” Boys further described how “the roof leaks when it rains, so we are sent home” and “when there are no desks, I sit on the floor. I feel like the school does not care about us.”

These findings extend existing research by showing infrastructure effects are psychosocial, not merely logistical. Boys interpret poor conditions as institutional neglect, eroding belonging within the school microsystem. When classrooms are overcrowded, sanitation blocks non-functional, or boarding facilities inadequate, the school fails to provide basic conditions for sustained engagement. This aligns with Moyo (2011) and Chimombo (2005), who found physical school conditions predicted dropout more strongly than household variables in rural Malawi and Tanzania.

Teacher Shortages and Teacher-Learner Relationships

Teacher availability and the quality of teacher-learner interactions were significant microsystem issues. Sixty percent of participants cited shortages of qualified teaching staff, particularly male teachers, as detrimental. Pupil-teacher ratios reached 1:70 in core subjects, resulting in limited individual attention and frequent untaught lessons.

This resonates with Mumba (2021), who highlighted that understaffed schools experience inconsistent curriculum coverage, leading learners to perceive school as ineffective. Teachers are key adults in the child’s immediate school microsystem. Their chronic absence or reliance on corporal punishment directly disrupts learning. Participant T7 stated: “Some teachers come once a week. When they are absent, we just play and go home.” A boy reported: “If you come late because of distance, you are beaten. So, I stopped coming.” The consequence was clear: “When teachers are absent, learners go home and sometimes never come back.”

The lack of male role models’ further limits boys’ ability to identify with academic success and discipline (UNESCO, 2021; Aikman & Unterhalter, 2005). Such patterns normalize absenteeism and frame school as hostile. The school microsystem fails to provide stable, supportive adult relationships essential for development. Strengthening teacher deployment and promoting positive discipline are direct microsystem interventions.

Learning Resources and Curriculum Relevance

Inadequate textbooks, limited teaching aids, and insufficient laboratories were identified by more than half of participants as barriers to learning. Document review confirmed textbook ratios of 1:5 in Mathematics and Science. Several boys noted that the curriculum feels disconnected from local realities, with limited opportunities for practical skills.

One Grade 10 participant remarked: “We need to learn things that help us in life, like farming or carpentry. Reading from books alone is not enough.” Teacher T12 observed: “We share one textbook among five learners in some subjects. This discourages boys from studying.” This reflects how resource scarcity and curriculum misalignment reduce the perceived value of schooling within the microsystem. The World

Bank (2019) similarly advocates integrating vocational training to engage learners who struggle with purely theoretical content.

When learning materials are absent and content feels irrelevant, the school cannot sustain proximal processes of engagement and mastery. Ensuring adequate textbooks and reviewing curriculum relevance are school-level actions that directly reinforce the learning microsystem.

Leadership and Administration

Effective leadership shapes the school microsystem by establishing norms, enforcing attendance, and maintaining facilities. Participants reported weak administrative capacity, including unmonitored timetables and inconsistent enforcement of attendance policies. These findings agree with Bush & Bell (2002) on the importance of proactive leadership in school improvement.

Teacher T3 noted: “Weak learner monitoring mechanisms mean boys disappear and no one follows up.” Boys reported: “The head teacher only comes to assembly. No one checks if teachers are teaching.” HT2 admitted: “We lack funds to maintain dormitories, so boarders sleep poorly and skip class.” Such gaps mean the microsystem lacks consistent adult accountability. When rules are not enforced and facilities deteriorate, boys receive implicit messages that attendance is optional.

Theoretical Implications: Microsystem Focus

The findings affirm Bronfenbrenner’s (1979) proposition that the microsystem exerts the most immediate influence on development. When the school microsystem fails to provide adequate physical conditions, consistent adult interaction, learning materials, and administrative oversight, boys’ educational engagement deteriorates. This study delimits the microsystem to the school environment, demonstrating that school-controlled factors independently contribute to dropout and can be addressed without resolving broader economic or cultural constraints.

The data show convergence with Sub-Saharan studies identifying infrastructure, distance, and teacher shortages as key drivers (Moyi, 2011; Chimombo, 2005; Mwanza & Phiri, 2018). It diverges from literature emphasizing household poverty as primary by showing school conditions are sufficient to cause dropout even if home factors were addressed.

Chapter Summary

This chapter discussed findings in relation to Objective 1, existing literature, and Bronfenbrenner’s microsystem. Results confirm that boys’ dropout in Ngabwe District is influenced by school-related challenges operating at the microsystem level: inadequate infrastructure and long distances, teacher shortages and punitive relationships, limited learning resources and curriculum misalignment, and weak administrative leadership. These findings underscore that interventions targeting the school environment are necessary first steps for improving retention. The following chapter will synthesize these findings to draw conclusions and propose school-level, evidence-based recommendations.

Conclusion

This study examined school-related factors contributing to boys’ dropout in secondary schools in Ngabwe District, Zambia. Findings revealed that conditions within the school microsystem — inadequate infrastructure and long walking distances, teacher shortages and punitive teacher-learner relationships,

limited learning materials and curriculum misalignment, and weak administrative leadership — independently contribute to disengagement and dropout among boys.

Theoretically, the study affirms Bronfenbrenner's (1979) proposition that the microsystem exerts the most immediate influence on development. When the school fails to provide adequate physical conditions, consistent adult presence, learning resources, and administrative oversight, boys' educational engagement deteriorates. Practically, results demonstrate that school-controlled conditions are sufficient to undermine persistence and therefore represent critical leverage points for intervention that do not depend on resolving broader economic or cultural constraints.

Recommendations

For Practice Based on school-level findings, the following actions within the direct control of schools and District Education authorities are recommended:

- 1. Infrastructure Development and Maintenance:** The District Education Board Secretary (DEBS) should prioritize auditing and rehabilitating classrooms, desks, sanitation blocks, and dormitories in schools located more than 5 km from settlements. Adequate boarding facilities should be constructed to reduce daily travel fatigue identified as a key driver of absenteeism.
- 2. Teacher Recruitment, Deployment, and Monitoring:** The Teaching Service Commission should prioritize deployment of qualified teachers, including male teachers, to rural schools in Ngabwe to address shortages and provide role models. Schools must strengthen monitoring systems to reduce teacher absenteeism and eliminate corporal punishment in order to improve teacher-learner relationships reported by participants.
- 3. Learning Resources and Curriculum Enhancement:** The Ministry of Education should ensure a 1:1 textbook-pupil ratio in core subjects and integrate practical skills components such as agriculture, carpentry, and ICT into the secondary curriculum. This addresses the identified disconnection between academic content and boys perceived needs, and responds to resource scarcity that discourages study.
- 4. School-Based Mentorship and Attendance Systems:** Schools should establish mentorship programmes and guidance sessions where teachers engage at-risk boys on goal setting and the value of education. Trained school focal-point teachers should provide psychosocial support and track attendance to enable early identification of boys at risk of dropout.

Areas for Further Research Given the study's focus on school-related factors, future research should:

- i) Conduct longitudinal studies within Ngabwe schools to assess the long-term impact of infrastructure improvements and teacher deployment on boys' retention rates.
- ii) Undertake comparative studies between rural schools with differing levels of infrastructure and teacher staffing to isolate which school-level interventions yield the strongest effect on reducing dropout.

REFERENCES

1. Asim, S., & Dee, T. S. (2016). Teacher turnover and student achievement: Evidence from North Carolina. *Education Finance and Policy*, 11(3), 325–350.
2. Bush, T., & Glover, D. (2016). School leadership and management in South Africa: Findings from a systematic literature review. *International Journal of Educational Management*, 30(2), 211–231.
3. Evans, D. K., & Yuan, F. (2022). How big are educational gender gaps in the developing world? World Bank Policy Research Working Paper No. 10000.
4. Ganimian, A. J., & Murnane, R. J. (2016). Improving education in developing countries: Lessons from rigorous impact evaluations. *Review of Educational Research*, 86(3), 719–755.
5. Kremer, M., Brannen, C., & Glennerster, R. (2013). The challenge of education and learning in the developing world. *Science*, 340(6130), 297–300.
6. Leithwood, K., & Sun, J. (2018). The nature and effects of transformational school leadership: A meta-analytic review. *Educational Administration Quarterly*, 54(4), 529–571.
7. McEwan, P. J. (2015). Improving learning in primary schools of developing countries: A meta-analysis of randomized experiments. *Review of Educational Research*, 85(3), 353–394.
8. Ministry of Education, Zambia. (2018). Annual education statistical bulletin. Lusaka: Government Printers.
9. Ministry of Education, Zambia. (2020). Annual education statistical bulletin. Lusaka: Government Printers.
10. Ministry of General Education, Zambia. (2017). Education statistical bulletin. Lusaka: Government Printers.
11. Mukuka, J. (2019). Curriculum irrelevance and learner dropout in rural Zambia. *Journal of African Education Studies*, 12(2), 55–68.
12. Mulemwa, P. (2016). Challenges in retaining boys in schools: A rural perspective. *African Journal of Education Studies*, 10(1), 34–50.
13. Mulenga, J. (2021). Factors influencing boy child dropout in Luapula Province, Zambia. *African Journal of Educational Research*, 12(2), 67–81.
14. Mumba, J. (2021). Factors influencing boy child dropout in Luapula Province, Zambia. *African Journal of Educational Research*, 12(2), 67–81.
15. Mwanza, C., & Phiri, K. (2018). The challenges of retaining boys in secondary education in rural Zambia. Lusaka: UNZA Press.
16. Mweru, M. (2015). Corporal punishment and school dropout in Kenya: Eight years after the ban. *Child Abuse Review*, 24(4), 248–258.
17. Popova, A., Evans, D. K., & Arancibia, V. (2016). Training teachers on the job: What works and how to measure it. World Bank Policy Research Working Paper No. 7834.
18. Snilstveit, B., et al. (2016). The impact of education programmes on learning and school participation in low- and middle-income countries. 3ie Systematic Review 24. London: International Initiative for Impact Evaluation.
19. UNESCO. (2015). Education for all 2000–2015: Achievements and challenges. Paris: UNESCO.
20. UNESCO. (2015). Teacher shortages and global education goals. Paris: UNESCO Policy Paper.
21. UNESCO. (2017). Global education monitoring report. Paris: UNESCO.

22. UNESCO. (2018). Global education monitoring report: Accountability in education. Paris: UNESCO.
23. UNESCO. (2019). Global education monitoring report: Gender report. Paris: UNESCO.
24. UNESCO. (2021). Global education monitoring report 2021/22: Non-state actors in education. Paris: UNESCO Publishing.
25. UNESCO-IIEP. (2018). School management and educational outcomes: Evidence from developing countries. Paris: UNESCO International Institute for Educational Planning.
26. UNICEF. (2018). Global initiative on out-of-school children. New York: UNICEF.
27. UNICEF. (2020). Education in Zambia: Overcoming barriers to access and retention. New York: UNICEF.
28. UNICEF. World Bank. (2019). Education sector analysis: Tackling barriers to education in rural Africa. Washington, DC: World Bank.
29. World Bank. (2019). Ending learning poverty: What will it take? Washington, DC: World Bank.
30. Zambia Statistics Agency (ZamStats). (2023). Education statistics bulletin 2022. Lusaka: ZamStats.