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**COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES
DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT**

**HIGH SCHOOL TEACHERS' PERCEPTION ON FACTORS
INFLUENCING STUDENTS' ACADEMIC ACHIEVEMENT IN
ADDIS ABABA**

BY

MELAKU TEGEGN

**A THESIS SUBMITTED TO COLLEGE OF EDUCATION AND
BEHAVIORAL STUDIES DEPARTMENT OF EDUCATIONAL PLANNING
AND MANAGEMENT IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN
SCHOOL LEADERSHIP**

JUNE, 2025

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DECLARATION

I want to say that this research thesis is completely my own work, although I did get some help and guidance from my advisor, Jeilu Oumer (Ph.D). I've made sure to give proper credit to all the sources I used while working on this study. In addition, I can assure you that this thesis, in whole or in part, hasn't been submitted for any other degree or academic qualification.

Declared by

Name _____

Signature _____

Department _____

Date _____

ACRONYMS

ANOVA	Analysis of Variance
CPD	Continuous Professional Development
ESDP	Education Sector Development Plan
FGD	Focus Group Discussion
GEQIP	General Education Quality Improvement Program
IT	Information Technology
MoE	Ministry of Education
OECD	Organization for Economic Co-operation and Development
SDG	Sustainable Development Goal
SES	Socio-economic Status
STEM	Science Technology Engineering and Mathematics
TESO	Teacher Education System Overhaul
UNESCO	United Nations Educational, Scientific and Cultural Organization
ZPD	Zone of Proximal Development

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Your unconditional love and faith in me have been my greatest motivation and the foundation of this accomplishment.

STATEMENT OF CERTIFICATE

This certification serves to affirm the originality and scholarly merit of Melaku Tegegn's thesis, "High School Teachers' Perception on Factors Influencing Students' Academic Achievement in Addis Ababa". The research fulfills partial requirements for the award of a School Leadership.

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ABSTRACT

Academic achievement in high school significantly influences students' future educational and career opportunities. While global research highlights socioeconomic status, teaching quality, and school resources as key determinants, few studies explore educators' perspectives in resource-constrained settings like Addis Ababa, Ethiopia where overcrowded classrooms, infrastructure gaps, and socioeconomic disparities prevail. This mixed-methods study investigates high school teachers' perceptions of the factors shaping student performance, drawing on focus group discussions (FGDs) with department heads and individual interviews with school directors across 20 public and private schools (N=100). Qualitative data was thematically analyzed, identifying critical influences such as teacher effectiveness, student motivation, parental engagement, and infrastructure limitations. Quantitative data was assessed using descriptive statistics (SPSS) and regression analysis to uncover patterns.

Findings reveal that teachers attribute poor academic outcomes primarily to systemic challenges overcrowding, material shortages and socio-cultural barriers like limited parental involvement. Regression results indicated that School Resources, Infrastructure, and Leadership (SRIL) had negligible impact ($\beta = 0.044$, $p = 0.755$), while Strategies for Improving Academic Outcomes (SIAO) unexpectedly correlated with lower performance ($\beta = -0.276$, $p = 0.003$), suggesting such interventions may be misaligned. Conversely, Factors Influencing Student Performance (FISP), including motivation and study habits, emerged as the strongest predictor ($\beta = 0.906$, $p < 0.001$). The study underscores a multifaceted crisis in Ethiopian high schools, marked by learning disparities, socioeconomic hurdles, outdated pedagogies, student psychological stress, and ineffective policies. These insights challenge conventional resource-centric approaches, advocating instead for student-centered reforms. Recommendations include targeted teacher training, remedial programs, school meal initiatives, mental health support, and evidence-based policy adjustments. By centering educators' voices and empirical analysis, this research provides actionable pathways to strengthen secondary education outcomes in Ethiopia.

Keywords: academic performance, student motivation, teacher perceptions, school resources, regression analysis, Ethiopia, education policy

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

A key indicator of an educational system's efficacy is academic accomplishment, which shows how well-prepared students are for their future academic, professional, and personal pursuits. Numerous aspects affect it globally, including as socioeconomic level, parental participation, the quality of instruction, school infrastructure, resource accessibility, and psychosocial components like self-esteem and motivation (OECD, 2018; UNESCO, 2017). Designing interventions and policies that improve student outcomes and lessen inequities requires an understanding of these drivers. Both individuals and societies gain from increased academic achievement, which promotes social cohesion, lowers poverty, and increases economic output (Hanushek & Woessmann, 2020). Academic achievement is a strategic objective for developing nations because it fosters national growth and the development of a skilled labor force (World Bank, 2019).

The development of infrastructure, technological integration, teacher preparation, and fair access to high-quality education are the main focuses of international initiatives to raise academic attainment. The Global Partnership for Education (GPE) and the United Nations Sustainable Development Goal 4 (SDG 4) are two initiatives that prioritize inclusive education and more investment, especially in low-income nations (UNESCO, 2015; GPE, 2021).

Academic success in Ethiopia, and particularly in Addis Ababa, is influenced by certain opportunities and obstacles. Due to its diversified population and fast urbanization, Addis Ababa the nation's political, economic and cultural center creates a complicated educational environment with unequal access to opportunities and resources.

Important factors that influence academic achievement in Ethiopian high schools include socioeconomic inequality, parental participation, instructional quality, and psychological elements (Tadesse, 2020; Abebe, 2019). In Addis Ababa, educators frequently witness dramatic differences between kids from wealthy families, who have the advantages of private tutoring and secure homes, and those from low-income households, who deal with issues including packed classrooms and no parental guidance (Hassen, 2021). In order to provide fair access to high-quality education, these discrepancies highlight the necessity of focused measures. Further

influencing academic results is the psychosocial environment in schools, which includes peer pressure and teacher-student connections (Mengistu & Demissie, 2018).

In Addis Ababa, urbanization brings additional complications such family instability, social turmoil and early career options that might divert pupils' attention from their education (Hassen, 2021). In addition to highlighting the necessity for comprehensive approaches to education that address issues both within and outside of the classroom, these outside factors also make already existing gaps worse. In Addis Ababa, educators see themselves as facilitators who must handle the changing situations that their students encounter.

To identify important obstacles and opportunities within the local educational environment, this study looks at high school teachers' perspectives of the factors impacting academic attainment in Addis Ababa city. It is anticipated that the results will advance knowledge of academic achievement in Ethiopian high schools and offer useful data to stakeholders, educators, and policymakers. Lastly, Ethiopia's national education plan, which prioritizes raising the quality, usefulness, and relevance of education for all students, is supported by the study. It also backs global efforts to promote inclusive and equitable education, as outlined in SDG-4.

1.2 Statement of the Problem

High school student's academic performance has a significant impact on how they will pursue further education and careers. However, there are still a number of intricate and varied aspects that affect students' academic achievement, necessitating feedback from all parties involved, especially educators. Teachers have a unique perspective on the elements influencing achievement since they are actively involved in their students' academic lives. Even though their viewpoints are important, little research has been done on how high school teachers in Addis Ababa, Ethiopia, view these factors.

According to research conducted worldwide, socioeconomic position (Coleman et al., 1966), parental participation (Fan & Chen, 2001), teaching quality (Hattie, 2009), peer influence (Ryan, 2001), and student motivation (Deci & Ryan, 1985) are all factors that affect academic success. The availability of resources and school infrastructure are other important factors (UNESCO, 2017). These conclusions however are frequently based on studies conducted in developed countries, which could not adequately reflect the particular difficulties encountered in developing

countries such as Ethiopian educational system, where socioeconomic inequality, teacher-student ratios and resource limitations pose particular obstacles.

Studies conducted in sub-Saharan Africa have demonstrated the important influence that classroom conditions and teacher quality have on student performance (Glewwe & Kremer, 2006). However, there is still a dearth of studies that explicitly address instructors' perceptions. Although some Ethiopian studies have looked at more general educational issues (Teshome, 2018; Alemayehu, 2020), there hasn't been a thorough investigation of how teachers view the variables affecting academic performance in Addis Ababa high schools. Developing successful educational policies and procedures that are adapted to the local context requires an understanding of these views.

This study aims to close this gap by examining how high school instructors in Addis Ababa perceive the elements affecting their pupils' academic performance. The study intends to promote efforts to enhance academic results in Ethiopia's secondary education sector by analyzing these viewpoints and offering insightful information to researchers, policymakers, and education stakeholders.

1.3 Research Question

The study proposed to answer the following questions:

1. What is the status of high school students' academic achievement in Addis Ababa, and what key factors do teachers perceive as influencing it?
2. How do high school teachers in Addis Ababa view the impact of school resources, infrastructure, and leadership on student achievement?
3. What strategies do teachers recommend to improve academic performance in Addis Ababa high schools?

1.4 Objective of the Study

1.4.1 General Objective

To investigate the factors influencing high school students' academic achievement in Addis Ababa and explore teachers' perspectives on strategies for improvement.

1.4.2 Specific Objectives

- i. To assess the current status of high school students' academic achievement in Addis Ababa and identify key factors perceived by teachers as influencing it.
- ii. To examine high school teachers' perceptions of the impact of school resources, infrastructure, and leadership on student achievement in Addis Ababa.
- iii. To explore and recommend strategies proposed by teachers for improving academic performance in Addis Ababa high schools.

1.5 Significance of the Study

This study seeks to explore the perceptions of high school teachers in Addis Ababa regarding the factors influencing students' academic performance. Understanding these perspectives can help identify key elements—such as teaching strategies, socio-cultural influences, and resource availability—that may support or hinder student success. The findings could provide valuable insights for educators and policymakers, informing strategies to enhance teaching practices and address challenges in student learning. Additionally, the study may contribute to ongoing efforts to improve educational quality in Addis Ababa by highlighting areas where targeted interventions could make a meaningful difference.

1.6 Delimitation of the Study

This study is geographically focused on Addis Ababa, the capital city of Ethiopia, where there is significant diversity in high schools regarding resources, student demographics and teaching methods. It does not extend to other regions of Ethiopia, acknowledging that different socio-economic and educational conditions in other areas could influence academic achievement in unique ways. The research specifically targets high school teachers teaching grades 9 to 12 in Addis Ababa, using their perceptions as the primary data source. It does not consider the perspectives of students or parents, even though their views may also impact student outcomes. The study aims to explore teachers' perceptions on factors such as classroom environment, teaching strategies, student motivation, parental involvement, and socio-economic challenges.

The study does not seek to establish causal relationships between the identified factors and student performance but instead focuses on understanding teachers' subjective views on these influences. It didn't not address broader issues like institutional policies, government reforms, or the national curriculum. The research is cross-sectional, collecting data during the 2024-2025

academic years, and does not track changes over time or examine longitudinal trends. Additionally, the study focused on general factors affecting academic achievement rather than delving into specific subject areas, student groups or educational interventions.

1.7 Definition of Terms

Academic Achievement – This looks at how well high school students in Addis Ababa are doing, based on their grades, exam scores, and other standardized tests.

Addis Ababa High Schools – These are the secondary schools in Ethiopia’s capital that serve students in grades 9 through 12, both public and private.

High School Teachers – These are the folks teaching students in grades 9 to 12 at both public and private secondary schools in Addis Ababa.

Infrastructure – This is all about the physical setup of schools, including classrooms, labs, bathrooms, electricity, and internet access, which all create a good environment for learning.

School Leadership – This is about the role of principals, vice-principals, and department heads in making decisions that affect school policies, motivate teachers, and improve student performance.

School Resources – This refers to the tools and materials available for learning, like textbooks, lab equipment, digital gadgets, and libraries that help students learn better.

Strategies for Improvement – These are ideas put forward by teachers to boost academic results, such as training for teachers, changes to the curriculum, getting parents involved, and making policy changes.

1.8 Organization of the Study

This research is systematically structured into five distinct chapters, each addressing critical components of the study to ensure coherence, logical progression, and academic rigor. The first chapter, introduction, establishes the foundational framework by presenting the study's background, problem statement, objectives, significance, definition of Key terms and organizational structure. It contextualizes the research within broader academic or societal discourses, clearly identifying gaps and justifying the need for the investigation.

The second chapter, literature review, synthesizes existing scholarship through theoretical perspectives and empirical studies. It examines relevant theories, models, and prior research to situate the current study within the larger body of knowledge, highlighting trends, contradictions, and unresolved questions that shape the research direction.

The third chapter, research methodology, elaborates on the study's design and methodological approaches. It outlines the research paradigm, data collection methods, sampling techniques and analytical strategies. Additionally, it addresses validity, reliability, and ethical considerations to ensure the credibility of the findings.

In the fourth chapter, data Analysis and interpretation, the collected data is systematically examined and interpreted. Results are presented using qualitative or quantitative techniques, supported by visual aids where necessary, and discussed in relation to the theoretical and empirical frameworks established earlier. This chapter bridges raw data and meaningful insights, directly addressing the research objectives.

Finally, the fifth chapter, conclusion and recommendations, consolidate key findings, assess the fulfillment of research objectives, and discuss the study's contributions. It provides practical recommendations for stakeholders and suggests future research directions while acknowledging limitations.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 Introduction

Academic achievement is a critical measure of students' success in educational settings, reflecting their ability to acquire knowledge, develop skills, and meet established learning objectives. It is often assessed through grades, test scores, and other performance indicators, and serves as a predictor of future opportunities in higher education and the workforce. Beyond individual success, academic achievement plays a pivotal role in shaping the socio-economic development of nations. Education is widely recognized as a cornerstone of national progress, as it equips individuals with the skills and knowledge necessary to contribute to economic growth, innovation, and social cohesion. In developing countries like Ethiopia, improving academic achievement is particularly vital for addressing challenges such as poverty, unemployment, and inequality.

In Ethiopia, education is a key driver of the nation's development agenda, as outlined in policies such as the Education Sector Development Plan (ESDP). However, despite significant efforts to expand access to education, challenges persist in ensuring quality and equity in academic performance, particularly in high schools. Ethiopian high schools face issues such as resource constraints, overcrowded classrooms, and varying levels of teacher preparedness, which hinder students' ability to achieve their full potential. Additionally, socio-economic factors, including poverty and limited access to educational materials, further exacerbate disparities in academic performance. Understanding the factors that influence academic achievement in this context is essential for designing effective interventions that can enhance educational outcomes and contribute to national development.

This introduction sets the stage for a deeper exploration of the theoretical and practical dimensions of academic achievement, with a focus on the unique challenges and opportunities in Ethiopian high schools. By examining the definition and significance of academic achievement, the role of education in national development, and the current state of academic performance in Ethiopia, this discussion aims to highlight the importance of addressing educational disparities and fostering an environment where all students can thrive.

2.2 Theoretical Perspectives

Academic achievement is a complex and multifaceted construct influenced by a variety of psychological, social, and environmental factors. Understanding the determinants of student performance requires an exploration of theoretical frameworks that provide insights into how these factors interact. This review examines three prominent theories: Bronfenbrenner's Ecological Systems Theory, Vygotsky's Sociocultural Theory, and Maslow's Hierarchy of Needs. Each theory offers a unique perspective on the factors that shape academic success, and together, they provide a comprehensive understanding of the interplay between individual, social, and environmental influences.

2.2.1 Bronfenbrenner's Ecological Systems Theory

Bronfenbrenner's Ecological Systems Theory (1979) posits that human development is shaped by a series of interconnected environmental systems, each of which influences an individual's growth and learning. These systems include the micro system (immediate environments such as family and school), the mesosystem (interactions between microsystems), the ecosystem (external environments that indirectly affect the individual, such as parental workplaces), the macrosystem (cultural and societal norms), and the chronosystem (changes over time). This theory emphasizes that academic achievement is not solely determined by individual characteristics but is profoundly influenced by the broader ecological context in which students are embedded.

The microsystem, particularly the family and school environments, plays a critical role in shaping student outcomes. For example, parental involvement in education, such as helping with homework or attending school events, has been consistently linked to higher academic achievement (Wang & Sheikh-Khalil, 2014). Similarly, positive teacher-student relationships and supportive school climates foster a sense of belonging and motivation, which are essential for academic success (Bronfenbrenner, 1979). The mesosystem, which involves the interaction between family and school, further reinforces these effects. For instance, effective communication between parents and teachers can create a cohesive support system for students.

The macrosystem and chronosystem highlight the broader societal and temporal influences on academic achievement. Cultural values, educational policies, and societal expectations shape the opportunities and challenges students face. For example, in societies that prioritize education,

students may receive more resources and encouragement to excel academically. Additionally, changes over time, such as technological advancements or shifts in family structures, can impact student learning and performance (Bronfenbrenner, 1979). Bronfenbrenner's theory underscores the importance of considering the multiple layers of influence on academic achievement and designing interventions that address these interconnected systems.

2.2.2 Vygotsky's Sociocultural Theory

Vygotsky's Sociocultural Theory (1978) emphasizes the role of social interactions and cultural tools in learning and development. Central to this theory is the concept of the Zone of Proximal Development (ZPD), which refers to the range of tasks that a learner can perform with the guidance of a more knowledgeable individual (e.g., a teacher or peer) but cannot yet accomplish independently. Vygotsky argued that learning is a socially mediated process, where interactions with others enable students to acquire new knowledge and skills.

In the context of academic achievement, Vygotsky's theory highlights the importance of collaborative learning environments. Peer discussions, group projects, and teacher scaffolding facilitate the development of critical thinking and problem-solving skills, which are essential for academic success (Mercer & Howe, 2012). For example, when students work together to solve complex problems, they can share perspectives and build on each other's ideas, leading to deeper understanding and mastery of the material.

Cultural tools, such as language, symbols, and technology, also play a crucial role in mediating learning. Language, in particular, is a primary tool for thought and communication, enabling students to internalize knowledge and express their understanding. Technology, such as educational software and online resources, can further enhance learning by providing access to information and facilitating interactive experiences (Vygotsky, 1978). Vygotsky's theory underscores the importance of creating culturally responsive and interactive classrooms that leverage social interactions and cultural tools to support student learning.

2.2.3 Maslow's Hierarchy of Needs

Maslow's Hierarchy of Needs (1943) posits that individuals must satisfy basic physiological and psychological needs before they can achieve their full potential, including academic success. The hierarchy consists of five levels: physiological needs (e.g., food, shelter), safety needs (e.g., security, stability), belongingness and love need (e.g., relationships, acceptance), esteem needs

(e.g., self-confidence, respect), and self-actualization (e.g., achieving one's potential). According to Maslow, students cannot focus on learning if their basic needs are unmet.

Research has consistently shown that unmet basic needs, such as hunger, lack of sleep, and unstable housing, negatively impact academic performance (Kaur, 2013). For example, students who experience food insecurity may struggle to concentrate in class and perform poorly on assessments. Similarly, students who feel unsafe or unsupported in their environments are less likely to engage in learning and more likely to experience anxiety and stress.

Schools that address students' basic needs through programs such as free meals, counseling services, and safe learning environments create conditions conducive to academic success. Furthermore, fostering a sense of belonging and self-esteem in students enhances their motivation and engagement, leading to improved academic outcomes (Maslow, 1943). Maslow's theory highlights the importance of adopting a holistic approach to education that addresses students' physical, emotional, and psychological needs.

Implications

The three theories: - Bronfenbrenner's Ecological Systems Theory, Vygotsky's Sociocultural Theory and Maslow's Hierarchy of Needs are highly relevant to the title "High School Teachers' Perception on Factors Influencing Students' Academic Achievement in Addis Ababa" as they provide a comprehensive framework for understanding the multifaceted influences on students' academic performance.

Bronfenbrenner's Ecological Systems Theory emphasizes that academic achievement is shaped by interconnected systems, ranging from immediate environments like family and school to broader societal and cultural contexts. In Addis Ababa, where socioeconomic, cultural and educational factors vary widely, this theory helps explain how teachers perceive the diverse influences on students' academic outcomes. For instance, teachers may highlight the critical role of family involvement (microsystem), especially in a context where parental support varies due to economic or cultural reasons. Similarly, the school environment (microsystem) and its resources, such as infrastructure and teaching quality, are likely to be perceived as key determinants of academic success. Broader societal factors (macrosystem), such as cultural attitudes toward education or government policies, may also shape teachers' perceptions of the challenges and opportunities students face. Additionally, changes over time (chronosystem), such

as educational reforms or urbanization in Addis Ababa, could influence teachers' views on evolving factors affecting academic achievement.

Vygotsky's Sociocultural Theory complements Bronfenbrenner's framework by highlighting the role of social interactions, cultural tools, and collaborative learning in academic achievement. In Addis Ababa, where classroom dynamics and cultural practices play a significant role in education, teachers' perceptions of these factors are crucial. For example, teachers may emphasize the importance of teacher-student interactions and peer collaboration, such as group work, in fostering academic success, especially in resource-constrained settings where peer support can compensate for limited resources. The use of cultural tools, such as language and technology, may be perceived as either a challenge or an opportunity, depending on their availability and teachers' ability to integrate them into instruction. Furthermore, teachers' perceptions of the Zone of Proximal Development (ZPD) could reveal their strategies for scaffolding learning and addressing diverse student abilities in Addis Ababa's high schools. This theory underscores the importance of creating culturally responsive and interactive classrooms that leverage social interactions and cultural tools to support student learning.

Maslow's Hierarchy of Needs adds another layer of understanding by emphasizing the importance of addressing students' basic physiological and psychological needs before they can achieve academic success. In Addis Ababa, where socioeconomic disparities are prevalent, teachers' perceptions of these needs are critical to understanding barriers to academic achievement. Teachers may identify basic needs, such as food, shelter, and safety, as significant challenges for students from low-income families, affecting their ability to focus and perform academically. The need for belongingness and self-esteem may also be perceived as essential for creating a supportive school environment that motivates students to succeed. Additionally, teachers' perceptions of school-based interventions, such as free meals and counseling services, could highlight their views on the importance of addressing students' holistic needs to improve academic outcomes. Maslow's theory highlights the importance of adopting a holistic approach to education that ensures students' physical, emotional, and psychological needs are met, creating a foundation for academic success.

Together, these theories provide a holistic framework for understanding teachers' perceptions of the factors influencing academic achievement in Addis Ababa. Bronfenbrenner's theory offers a broad ecological perspective, Vygotsky's theory focuses on social and cultural dynamics in the

classroom, and Maslow's theory emphasizes the foundational needs that must be met for learning to occur. By integrating these theories, the study can offer a nuanced understanding of the challenges and opportunities in the local educational context and inform strategies to enhance academic outcomes. Teachers' perceptions, informed by these theories, can guide the development of targeted interventions that address family and community engagement, collaborative and culturally responsive teaching practices, and holistic support systems to meet students' basic and psychological needs. This integrated approach ensures a comprehensive understanding of the factors influencing academic achievement and provides actionable insights for improving educational practices in Addis Ababa.

2.3 Empirical Review

2.3.1 Factors Influencing Students' Academic Achievement

2.3.1.1 Teacher-Related Factors in Academic Achievement

Teacher-related factors are among the most significant determinants of student academic achievement. Teachers play a central role in shaping the learning environment, delivering instruction, and fostering students' intellectual and emotional growth. This review explores four key teacher-related factors: teachers' qualifications and pedagogical skills, teaching methods and classroom management, teacher motivation and job satisfaction, and teacher-student relationships. Each of these factors has been extensively studied and shown to have a profound impact on student outcomes. In the context of Ethiopia, where educational challenges such as resource constraints, large class sizes, and disparities between urban and rural areas persist, understanding and addressing these factors is critical for improving academic performance.

2.3.1.2 Teachers' Qualifications and Pedagogical Skills

Teachers' qualifications and pedagogical skills are critical predictors of student academic success. Research consistently demonstrates that teachers with higher levels of education, specialized training, and certification are better equipped to deliver effective instruction and address diverse learning needs (Darling-Hammond, 2000). For example, teachers with advanced degrees in their subject areas tend to have deeper content knowledge, which enables them to explain complex concepts more clearly and engage students in higher-order thinking. Additionally, pedagogical skills such as lesson planning, assessment design, and differentiated

instruction are essential for creating inclusive and effective learning environments (Stronge, 2018).

In Ethiopia, the lack of qualified teachers remains a significant challenge, particularly in rural areas. According to the Ministry of Education (MoE, 2015), many teachers in rural schools are under qualified, with limited access to professional development opportunities. This contributes to disparities in academic performance between urban and rural schools. For instance, urban schools often have better-trained teachers, while rural schools struggle with high teacher turnover and a lack of resources. Addressing this issue requires investments in teacher training programs and professional development opportunities to enhance teachers' qualifications and pedagogical skills. Programs such as the Teacher Education System Overhaul (TESO) in Ethiopia have been introduced to improve teacher training, but their implementation and impact remain uneven (MoE, 2015).

Teaching Methods and Classroom Management

The teaching methods employed by educators and their ability to manage classrooms effectively are crucial for student engagement and learning outcomes. Active learning strategies, such as group work, problem-based learning, and hands-on activities, have been shown to enhance student motivation and understanding (Prince, 2004). In contrast, traditional lecture-based methods often fail to engage students and promote critical thinking.

Classroom management is equally important, as it ensures a structured and conducive learning environment. Effective classroom management involves setting clear expectations, maintaining discipline, and fostering positive interactions among students (Marzano et al., 2003). Teachers who excel in classroom management can minimize disruptions and maximize instructional time, leading to improved academic outcomes. However, inadequate training in classroom management techniques often results in chaotic classrooms and reduced learning opportunities, particularly in resource-constrained settings.

Several studies highlight these challenges. Asgedom et al. (2014) found that overcrowded classrooms in Ethiopian primary and secondary schools hinder interactive teaching methods, forcing teachers to rely on rote memorization and teacher-centered approaches. Similarly, Abebe and Woldehanna (2013) revealed that many Ethiopian teachers lack adequate training in modern pedagogical techniques, leading to poor classroom management and low student engagement.

Resource limitations also play a critical role. Woldie et al. (2018) emphasized that shortages of textbooks, laboratory equipment, and classroom space significantly affect teaching quality, particularly in rural Ethiopian schools. Furthermore, Melesse and Gulie (2019) noted that classroom disruptions and disciplinary issues are common in Ethiopian schools due to insufficient teacher training in behavior management strategies.

2.3.3 Teacher Motivation and Job Satisfaction

Teacher motivation and job satisfaction are closely linked to teaching effectiveness and student achievement. Motivated teachers are more likely to invest time and effort in their work, leading to higher-quality instruction and better student outcomes (Skaalvik & Skaalvik, 2011). Factors that influence teacher motivation include recognition, opportunities for professional growth, and supportive working conditions.

Job satisfaction, on the other hand, is influenced by factors such as salary, workload, and relationships with colleagues and administrators. Studies have shown that teachers who are satisfied with their jobs are more committed to their profession and less likely to experience burnout (Klassen & Chiu, 2011). In Ethiopia, low salaries, heavy workloads, and limited professional development opportunities have been identified as major contributors to low teacher motivation and job satisfaction (Tadesse & Muluye, 2020). For example, many teachers in rural areas face challenging working conditions, including long commutes, inadequate housing, and limited access to basic amenities. These factors contribute to high levels of teacher turnover and absenteeism, which negatively impact student learning.

To address these issues, policymakers must prioritize improving teachers' working conditions and providing incentives for teachers in underserved areas. For instance, initiatives such as housing allowances, performance-based bonuses, and opportunities for career advancement could help boost teacher motivation and job satisfaction. Additionally, creating a supportive school culture that values and recognizes teachers' contributions can enhance their commitment to the profession.

2.3.4 Teacher-Student Relationship

The relationship between teachers and students is a critical factor in academic achievement. Positive teacher-student relationships foster a sense of belonging, trust, and motivation, which are essential for student engagement and learning (Roorda et al., 2011). Teachers who show

empathy, respect, and encouragement create a supportive environment where students feel valued and confident in their abilities.

Research has shown that students who have strong relationships with their teachers are more likely to participate in class, complete assignments, and achieve higher grades (Cornelius-White, 2007). Conversely, negative or indifferent teacher-student relationships can lead to disengagement, behavioral issues, and poor academic performance. In Ethiopian high schools, cultural norms and large class sizes often pose challenges to building strong teacher-student relationships. For example, traditional hierarchical relationships between teachers and students may discourage open communication and collaboration. Additionally, the high student-to-teacher ratio makes it difficult for teachers to provide individualized attention and support.

Strategies such as mentoring programs, smaller class sizes, and training in culturally responsive teaching practices can help address these challenges and promote positive interactions. For instance, initiatives that encourage teachers to adopt a more student-centered approach, where students' voices and experiences are valued, can help build trust and rapport. Furthermore, fostering a school culture that emphasizes mutual respect and collaboration can enhance teacher-student relationships and improve academic outcomes.

Synthesis

Teacher-related factors are integral to student academic achievement, as they directly influence the quality of instruction and the learning environment. Teachers' qualifications and pedagogical skills determine their ability to deliver effective instruction, while teaching methods and classroom management shape the learning experience. Teacher motivation and job satisfaction impact their commitment and performance, and teacher-student relationships influence students' emotional and academic well-being.

In the context of Ethiopian high schools, where resource constraints and systemic challenges persist, addressing these factors requires a multifaceted approach. Policymakers and educators must prioritize investments in teacher training, infrastructure, and professional development to enhance teachers' qualifications and pedagogical skills. Additionally, promoting active learning strategies and effective classroom management techniques can improve student engagement and learning outcomes. Boosting teacher motivation and job satisfaction through better working conditions, incentives, and supportive school cultures is essential for retaining qualified teachers

and improving educational quality. Finally, fostering positive teacher-student relationships through mentoring programs and culturally responsive teaching practices can create a more inclusive and supportive learning environment.

B. Student-Related Factors in Academic Achievement

Student-related factors are critical determinants of academic achievement, as they directly influence how students engage with the learning process and respond to educational opportunities. This review focuses on three key student-related factors: motivation and attitude toward learning, study habits and learning styles, and socioeconomic background. Each of these factors has been extensively studied and shown to have a significant impact on academic performance. In the context of Ethiopia, where educational challenges such as poverty, limited resources, and cultural barriers persist, understanding these factors is essential for designing effective interventions to improve student outcomes.

2.4 Motivation and Attitude toward Learning

Motivation and attitude toward learning are fundamental drivers of academic success. Motivation refers to the internal and external factors that stimulate students to engage in learning activities, while attitude reflects their perceptions and feelings about education. Research has consistently shown that motivated students are more likely to set goals, persist through challenges, and achieve higher academic outcomes (Pintrich, 2003). Intrinsic motivation, which stems from a genuine interest in learning, is particularly powerful in fostering long-term academic success (Deci & Ryan, 2000).

In contrast, a lack of motivation or a negative attitude toward learning can lead to disengagement, absenteeism, and poor performance. Factors such as uninspiring teaching methods, lack of relevance in the curriculum, and low self-efficacy can diminish students' motivation and attitude toward learning (Bandura, 1997). In Ethiopia, cultural and socioeconomic factors often influence students' motivation and attitudes. For example, students in rural areas may face challenges such as long distances to school, household responsibilities, and limited parental support, which can negatively impact their motivation (MoE, 2015). Additionally, societal expectations and gender norms may discourage girls from pursuing education, further affecting their attitudes toward learning.

To address these challenges, interventions should focus on creating a supportive and engaging learning environment. Strategies such as incorporating culturally relevant content, providing mentorship programs, and fostering a growth mindset can help enhance students' motivation and attitudes. For instance, initiatives that highlight the value of education and its role in improving livelihoods can inspire students to stay committed to their studies.

2.5 Study Habits and Learning Styles

Study habits and learning styles are critical factors that influence how students process and retain information. Study habits refer to the routines and strategies students use to prepare for exams and complete assignments, while learning styles reflect their preferred methods of acquiring knowledge (e.g., visual, auditory, or kinesthetic). Effective study habits, such as regular review, time management, and active learning, have been shown to improve academic performance (Credé&Kuncel, 2008). Similarly, understanding and accommodating students' learning styles can enhance their engagement and comprehension (Felder & Silverman, 1988).

In Ethiopia, many students struggle with developing effective study habits due to a lack of guidance and resources. For example, students in rural areas often lack access to textbooks, study materials, and quiet study spaces, which hinders their ability to prepare for exams (Tadesse & Muluye, 2020). Additionally, the traditional teacher-centered approach to education in many Ethiopian schools does not encourage active learning or critical thinking, limiting students' ability to develop effective study habits.

To address these issues, educators should focus on teaching students how to study effectively and adapt their teaching methods to accommodate diverse learning styles. For instance, incorporating active learning strategies, providing study skills workshops, and using multimedia resources can help students develop better study habits and engage with the material more effectively. Additionally, promoting collaborative learning and peer tutoring can create a supportive environment where students can learn from one another.

2.6 Socioeconomic Background

Socioeconomic background is one of the most significant predictors of academic achievement. Students from higher socioeconomic backgrounds often have access to better resources, such as quality schools, tutoring, and educational materials, which enhance their learning opportunities

(Sirin, 2005). In contrast, students from lower socioeconomic backgrounds face numerous barriers, including poverty, inadequate nutrition, and limited parental education, which can hinder their academic performance (Bradley & Corwyn, 2002).

In Ethiopia, socioeconomic disparities are a major challenge in the education system. Many students, particularly in rural areas, come from low-income families and face significant obstacles to accessing education. For example, the cost of school supplies, uniforms, and transportation can be prohibitive for families living in poverty (MoE, 2015). Additionally, children from low-income households are often required to work or contribute to household chores, leaving little time for studying or attending school. These challenges are compounded by the lack of infrastructure and resources in many schools, which further limits students' ability to succeed academically.

To address these disparities, policymakers and educators must implement targeted interventions that support students from low-income backgrounds. For instance, providing scholarships, free school meals, and access to educational materials can help reduce the financial burden on families and ensure that all students have the opportunity to learn. Additionally, community-based programs that raise awareness about the importance of education and provide support to families can help create a more conducive environment for student success.

Synthesis

Student-related factors play a critical role in shaping academic achievement, as they influence how students engage with the learning process and respond to educational opportunities. Motivation and attitude toward learning determine students' willingness to invest effort in their studies, while study habits and learning styles affect their ability to process and retain information. Socioeconomic background, on the other hand, influences students' access to resources and support, which are essential for academic success.

In the context of Ethiopia, where educational challenges such as poverty, limited resources, and cultural barriers persist, addressing these factors requires a comprehensive and multifaceted approach. Interventions should focus on enhancing students' motivation and attitudes through mentorship programs, culturally relevant content, and a supportive learning environment. Additionally, teaching effective study habits and accommodating diverse learning styles can help students develop the skills they need to succeed academically. Finally, addressing socioeconomic

disparities through targeted interventions and community-based programs can ensure that all students have the opportunity to achieve their full potential.

2.7 School-Related Factors in Academic Achievement

School-related factors are critical determinants of academic achievement, as they shape the learning environment and influence the quality of education students receive. This review focuses on three key school-related factors: school infrastructure and learning resources, class size and student-teacher ratio, and curriculum and assessment methods. Each of these factors has been extensively studied and shown to have a significant impact on student outcomes. In the context of Ethiopia, where educational challenges such as resource constraints, overcrowded classrooms, and outdated curricula persist, understanding these factors is essential for designing effective interventions to improve academic performance.

2.7.1 School Infrastructure and Learning Resources

School infrastructure and learning resources are foundational elements of a conducive learning environment. Adequate infrastructure, including classrooms, libraries, laboratories, and sanitation facilities, is essential for creating a safe and comfortable space for students to learn (Glewwe et al., 2011). Additionally, access to learning resources such as textbooks, computers, and teaching aids enhances the quality of instruction and supports student engagement.

Research has shown that schools with better infrastructure and resources tend to achieve higher academic outcomes (Fuller, 1987). For example, students in well-equipped schools are more likely to participate in hands-on learning activities, which can improve their understanding and retention of concepts. Conversely, schools with poor infrastructure and limited resources often struggle to provide quality education, leading to lower student achievement.

In Ethiopia, the lack of adequate infrastructure and learning resources is a significant challenge, particularly in rural areas. Many schools lack basic facilities such as electricity, clean water, and functional classrooms, which negatively impacts the learning environment (MoE, 2015). Additionally, the shortage of textbooks and teaching materials limits students' ability to engage with the curriculum effectively. Addressing these challenges requires significant investments in school infrastructure and the provision of essential learning resources. For instance, initiatives such as the General Education Quality Improvement Program (GEQIP) in Ethiopia have aimed

to improve school infrastructure and resource availability, but implementation gaps remain (MoE, 2015).

2.7.2 Class Size and Student-Teacher Ratio

Class size and student-teacher ratio are critical factors that influence the quality of instruction and student learning outcomes. Smaller class sizes and lower student-teacher ratios allow teachers to provide individualized attention, monitor student progress more effectively, and create a more interactive learning environment (Blatchford et al., 2002). Research has shown that students in smaller classes tend to perform better academically, particularly in the early grades (Finn et al., 2003).

In contrast, large class sizes and high student-teacher ratios often result in overcrowded classrooms, limited teacher-student interaction, and reduced opportunities for active learning. These conditions can lead to lower student engagement, increased behavioral issues, and poorer academic outcomes (Hanushek, 1999). In Ethiopia, overcrowded classrooms are a common issue, particularly in urban areas where schools are often overenrolled. For example, some classrooms accommodate 50 or more students, making it difficult for teachers to manage the class effectively and provide individualized support (Tadesse & Muluye, 2020).

To address these challenges, policymakers must prioritize reducing class sizes and improving the student-teacher ratio. Strategies such as hiring more teachers, constructing additional classrooms, and implementing double-shift systems can help alleviate overcrowding and create a more conducive learning environment. Additionally, providing training for teachers on managing large classes effectively can enhance their ability to deliver quality instruction in challenging conditions.

2.7.3 Curriculum and Assessment Methods

The curriculum and assessment methods used in schools play a critical role in shaping student learning outcomes. A well-designed curriculum that is relevant, engaging, and aligned with students' needs and abilities can enhance their understanding and motivation (Darling-Hammond, 2000). Similarly, effective assessment methods that measure student learning accurately and provide constructive feedback can support their academic growth (Black & Wiliam, 1998).

In contrast, an outdated or irrelevant curriculum and ineffective assessment methods can hinder student learning and engagement. For example, a curriculum that focuses heavily on rote memorization and lacks practical applications may fail to develop students' critical thinking and problem-solving skills (Hattie, 2009). Similarly, assessments that rely solely on high-stakes exams may create undue stress and fail to provide meaningful feedback to students.

In Ethiopia, the curriculum and assessment methods have been criticized for being overly rigid and exam-focused. The emphasis on national exams often leads to a “teaching to the test” approach, where teachers prioritize exam preparation over deep learning (MoE, 2015). Additionally, the curriculum has been criticized for lacking relevance to students' lives and the needs of the labor market. To address these issues, reforms are needed to make the curriculum more flexible, practical, and student-centered. For instance, incorporating project-based learning, vocational training, and formative assessments can enhance student engagement and prepare them for real-world challenges.

Synthesis

School-related factors are integral to academic achievement, as they shape the learning environment and influence the quality of education students receive. School infrastructure and learning resources provide the foundation for a conducive learning environment, while class size and student-teacher ratio determine the level of individualized attention students receive. The curriculum and assessment methods, on the other hand, influence the relevance and effectiveness of instruction.

In the context of Ethiopia, where educational challenges such as resource constraints, overcrowded classrooms, and outdated curricula persist, addressing these factors requires a comprehensive and multifaceted approach. Investments in school infrastructure and learning resources are essential for creating a safe and supportive learning environment. Reducing class sizes and improving the student-teacher ratio can enhance the quality of instruction and student engagement. Finally, reforming the curriculum and assessment methods to make them more relevant, flexible, and student-centered can improve learning outcomes and prepare students for future success.

2.8 Family and Community-Related Factors in Academic Achievement

Family and community-related factors play a pivotal role in shaping students' academic achievement. These factors influence students' motivation, access to resources, and overall learning environment, both at home and in their communities. This review focuses on three key family and community-related factors: parental involvement and support, home environment and socioeconomic status, and peer influence and neighborhood effects. Each of these factors has been extensively studied and shown to have a significant impact on student outcomes. In the context of Ethiopia, where cultural norms, socioeconomic disparities, and community dynamics shape educational experiences, understanding these factors is essential for designing effective interventions to improve academic performance.

2.8.1 Parental Involvement and Support

Parental involvement and support are critical determinants of student academic success. Research consistently shows that students whose parents are actively involved in their education tend to perform better academically (Jeynes, 2007). Parental involvement can take various forms, including helping with homework, attending school meetings, and encouraging educational aspirations. Such involvement fosters a positive attitude toward learning, enhances students' self-esteem, and reinforces the importance of education.

Parental support, particularly emotional and motivational support, is equally important. Students who feel supported by their parents are more likely to persevere through academic challenges and set higher educational goals (Fan & Chen, 2001). However, the level of parental involvement and support often varies depending on factors such as parents' education level, socioeconomic status, and cultural norms.

In Ethiopia, parental involvement in education is often limited, particularly in rural areas where parents may have low levels of education or face economic constraints. For example, many parents in rural communities are unable to assist their children with homework or attend school meetings due to work commitments or lack of awareness about the importance of education (MoE, 2015). Additionally, cultural norms may discourage parents, especially mothers, from actively participating in their children's education. To address these challenges, interventions should focus on raising awareness about the importance of parental involvement and providing parents with the tools and resources to support their children's learning. For instance,

community-based programs that educate parents about their role in education and encourage their participation can help bridge this gap.

2.8.2 Home Environment and Socioeconomic Status

The home environment and socioeconomic status (SES) are significant predictors of academic achievement. A supportive home environment, characterized by access to learning resources, a quiet study space, and a culture of learning, fosters academic success (Bradley & Corwyn, 2002). Conversely, a chaotic or resource-poor home environment can hinder students' ability to focus on their studies and complete assignments.

Socioeconomic status, which encompasses factors such as family income, parental education, and occupation, also plays a critical role in shaping educational outcomes. Students from higher SES families often have access to better resources, such as tutoring, educational materials, and extracurricular activities, which enhance their learning opportunities (Sirin, 2005). In contrast, students from low SES families face numerous barriers, including poverty, inadequate nutrition, and limited access to educational resources, which can negatively impact their academic performance.

In Ethiopia, socioeconomic disparities are a major challenge in the education system. Many students, particularly in rural areas, come from low-income families and face significant obstacles to accessing education. For example, the cost of school supplies, uniforms, and transportation can be prohibitive for families living in poverty (MoE, 2015). Additionally, children from low SES households are often required to work or contribute to household chores, leaving little time for studying or attending school. These challenges are compounded by the lack of infrastructure and resources in many schools, which further limits students' ability to succeed academically.

To address these disparities, policymakers and educators must implement targeted interventions that support students from low SES backgrounds. For instance, providing scholarships, free school meals, and access to educational materials can help reduce the financial burden on families and ensure that all students have the opportunity to learn. Additionally, community-based programs that raise awareness about the importance of education and provide support to families can help create a more conducive environment for student success.

2.8.3 Peer Influence and Neighborhood Effects

Peer influence and neighborhood effects are critical factors that shape students' academic achievement and behavior. Peers play a significant role in shaping students' attitudes toward learning, study habits, and educational aspirations. Positive peer relationships can foster a culture of academic excellence, where students motivate and support one another to achieve their goals (Ryan, 2001). Conversely, negative peer influence, such as pressure to engage in disruptive behavior or neglect academic responsibilities, can hinder students' academic performance.

Neighborhood effects, including the availability of community resources, safety, and social norms, also influence educational outcomes. Students who live in supportive neighborhoods with access to libraries, community centers, and safe spaces for learning are more likely to succeed academically (Leventhal & Brooks-Gunn, 2000). In contrast, students in disadvantaged neighborhoods often face challenges such as crime, violence, and limited access to educational resources, which can negatively impact their academic performance.

In Ethiopia, peer influence and neighborhood effects are shaped by cultural and socioeconomic factors. For example, in rural communities, students may face pressure to prioritize household responsibilities over education, while in urban areas; peer pressure to engage in risky behaviors can negatively impact academic performance (Tadesse & Muluye, 2020). Additionally, the lack of community resources and safe spaces for learning in many neighborhoods limits students' ability to focus on their studies.

To address these challenges, interventions should focus on creating a supportive peer and neighborhood environment. For instance, establishing after-school programs, mentorship initiatives, and safe spaces for learning can help students stay engaged in their studies and avoid negative peer influences. Additionally, community-based programs that promote the value of education and encourage positive social norms can help create a more conducive environment for student success.

Synthesis

Family and community-related factors are integral to academic achievement, as they shape students' motivation, access to resources, and overall learning environment. Parental involvement and support foster a positive attitude toward learning, while the home environment

and socioeconomic status determine students' access to educational resources and opportunities. Peer influence and neighborhood effects, on the other hand, shape students' attitudes, behaviors, and aspirations.

In the context of Ethiopia, where cultural norms, socioeconomic disparities, and community dynamics shape educational experiences, addressing these factors requires a comprehensive and multifaceted approach. Raising awareness about the importance of parental involvement and providing parents with the tools and resources to support their children's learning can enhance academic outcomes. Addressing socioeconomic disparities through targeted interventions and community-based programs can ensure that all students have the opportunity to succeed. Finally, creating a supportive peer and neighborhood environment through after-school programs, mentorship initiatives, and safe spaces for learning can help students stay engaged in their studies and achieve their full potential.

2.9 Empirical Studies on Academic Achievement in Ethiopia

High school teachers play a critical role in shaping students' academic achievement, as they are directly involved in the teaching and learning process. Their perceptions of the factors influencing student performance provide valuable insights into the challenges and opportunities within the education system. This review explores empirical studies on high school teachers' perceptions of factors influencing academic achievement in Addis Ababa, focusing on socioeconomic status, school environment, parental involvement, and teacher-related factors. Additionally, it incorporates comparative studies from other nations to highlight best practices and identify gaps in existing research.

2.9.1 Teachers' Perception of Socioeconomic Status

Socioeconomic status (SES) is one of the most frequently cited factors influencing academic achievement, as perceived by high school teachers in Addis Ababa. Teachers often observe that students from higher SES families tend to perform better academically due to access to resources such as private tutoring, educational materials, and a supportive home environment (Tadesse & Muluye, 2020). For example, a study by Asgedom et al. (2018) found that teachers in Addis Ababa reported significant disparities in academic performance between students from wealthy families and those from low-income backgrounds. Teachers noted that students from low-income

families often face challenges such as the inability to afford school supplies, uniforms, and transportation, which negatively impact their ability to focus on their studies.

Comparison with Other Nations

Similar findings have been reported in other countries. In South Africa, teachers have highlighted the impact of poverty on student performance, with students from disadvantaged backgrounds often struggling to access basic educational resources (Spaull, 2013). In contrast, countries like Finland have implemented policies to reduce socioeconomic disparities in education, such as providing free meals, transportation, and learning materials to all students (Sahlberg, 2011). These measures have contributed to Finland's reputation as one of the most equitable education systems in the world.

2.9.2 Teachers' Perception of the School Environment

The school environment, including infrastructure, resources, and class size, is another critical factor influencing academic achievement, as perceived by high school teachers in Addis Ababa. Teachers often report that schools with better infrastructure, such as well-equipped classrooms, libraries, and laboratories, foster a more conducive learning environment (Asgedom et al., 2018). However, many public schools in Addis Ababa struggle with overcrowding, with some classrooms accommodating 50 or more students. Teachers noted that managing large class sizes is challenging, as it limits their ability to provide individualized attention and address the diverse needs of students.

Comparison with Other Nations

In contrast, countries like South Korea and Japan have implemented policies to reduce class sizes and improve school infrastructure. For example, South Korea has invested heavily in modernizing school facilities and ensuring that all students have access to technology and digital learning tools (Kim & Lee, 2010). Similarly, Japan's focus on small class sizes and well-resourced schools has contributed to its high academic performance in international assessments (OECD, 2018). These examples highlight the importance of investing in school infrastructure and reducing class sizes to improve academic outcomes.

2.9.3 Teachers' Perception of Parental Involvement

Parental involvement is widely recognized by high school teachers in Addis Ababa as a critical factor influencing academic achievement. Teachers often observe that students whose parents are actively involved in their education, such as attending parent-teacher meetings and monitoring homework, tend to perform better academically (Mekonnen, 2017). However, teachers also noted that the level of parental involvement varies widely, with many parents citing work commitments and lack of awareness as barriers to participation.

Comparison with Other Nations

In countries like the United States and the United Kingdom, parental involvement is considered a key determinant of academic success. Studies have shown that students whose parents are actively engaged in their education are more likely to achieve higher grades and complete their schooling (Desforges & Abouchaar, 2003). In contrast, in many developing countries, including Ethiopia, cultural norms and economic constraints often limit parental involvement. For example, in rural areas of India, parents often prioritize work over education, which negatively impacts student performance (Kingdon, 2007). These findings underscore the need for interventions that promote parental involvement and address cultural and economic barriers.

2.9.4 Teachers' Perception of Teacher-Related Factors

High school teachers in Addis Ababa also recognize the role of teacher-related factors in influencing academic achievement. Teachers often emphasize the importance of professional development and training in enhancing their ability to deliver quality education. A study by Asgedom et al. (2018) found that teachers who participated in training programs on pedagogical strategies and classroom management reported feeling more confident and effective in their teaching.

However, teachers also highlighted challenges such as heavy workloads, limited access to teaching materials, and low morale. Many teachers reported feeling overwhelmed by the demands of managing large class sizes and meeting curriculum requirements, which leaves little time for lesson planning and individualized instruction (Tadesse & Muluye, 2020). Additionally, teachers expressed concern about the lack of incentives and recognition for their efforts, which affects their motivation and job satisfaction.

Comparison with Other Nations

In countries like Finland and Singapore, teacher training and professional development are prioritized as key components of the education system. Finland, for example, requires all teachers to hold a master's degree and provides ongoing professional development opportunities to ensure that teachers are equipped with the latest pedagogical strategies (Sahlberg, 2011). Similarly, Singapore's focus on teacher training and career progression has contributed to its high academic performance in international assessments (OECD, 2018). These examples highlight the importance of investing in teacher training and professional development to improve academic outcomes.

2.10 Gaps in Existing Research

Despite growing research on Ethiopian education, few studies have deeply examined high school teachers' perceptions of academic achievement factors in Addis Ababa, particularly concerning urban-specific challenges. For instance, while socioeconomic status (SES) is widely recognized as a key determinant of student success (Hailu & Adugna, 2021), there is limited research on how intra-city disparities such as private vs. public school access or neighborhood wealth gaps shape teachers' expectations and instructional strategies (Tarekegn & Alemu, 2022). Additionally, Addis Ababa's overcrowded classrooms remain a critical yet understudied issue. UNESCO (2020) reports that Ethiopian urban schools average 60+ students per classroom, yet little is known about how teachers perceive this challenge and adapt their pedagogy (MoE, 2021).

Another gap lies in urban migration's impact on education. Many students in Addis Ababa are rural-urban migrants facing language barriers (e.g., transitioning from Afaan Oromo to Amharic-medium instruction) and cultural adjustments (Abebe & Woldehanna, 2023). However, no studies explore how teachers perceive these students' struggles or modify support systems. Furthermore, while Addis Ababa has better ICT infrastructure than rural areas, digital divides persist—especially between elite and low-income schools (Gebre & Poluha, 2022). Teachers' views on integrating technology into teaching remain underexplored, despite global evidence that digital tools enhance learning (Selwyn, 2019).

Teacher retention is another pressing issue. Addis Ababa's educators face high attrition rates due to stress, low salaries, and better opportunities in private institutions (Worku & Melesse, 2020).

Yet, research rarely examines how this turnover affects teacher morale and student outcomes. Finally, while Ethiopia has introduced policies like the General Education Quality Improvement Program (GEQIP), teachers' perceptions of policy effectiveness in Addis Ababa are scarcely documented (MoE, 2021). Addressing these gaps can provide actionable insights for urban education reform.

2.11 Conceptual Framework

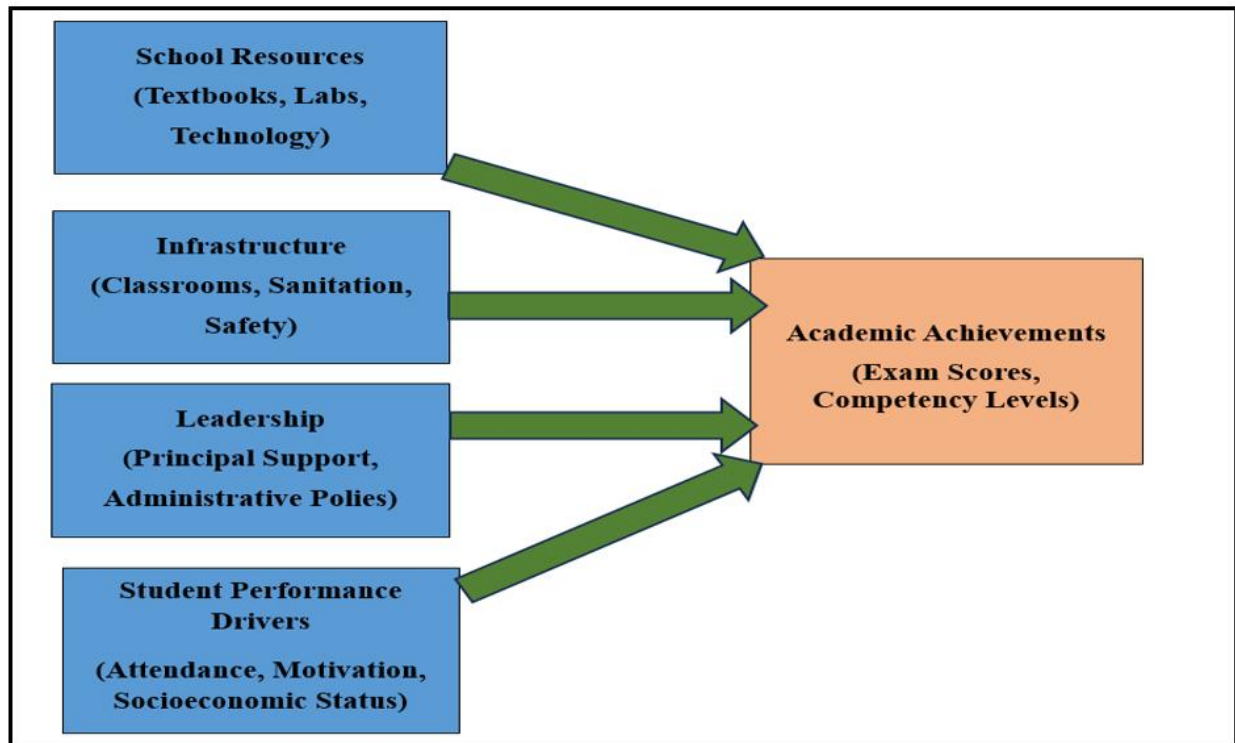


Figure-2.1: Conceptual Framework of the Study

A. Independent Variables (Influencing Factors)

These are the **primary drivers** of academic achievement, categorized into:

1. School Resources

- Examples: Textbooks, laboratory equipment, digital tools, library access.
- Impact: Adequate resources enable effective teaching and active learning.

2. Infrastructure

- Examples: Classroom conditions, sanitation, safety, electricity, internet.
- Impact: Poor infrastructure disrupts learning; well-maintained facilities foster engagement.

3. **Leadership & Policies**

- Examples: Principal's vision, teacher support, disciplinary policies, curriculum design.
- Impact: Strong leadership correlates with higher teacher morale and student discipline.

4. **Student Performance Drivers**

- Examples: Attendance, motivation, parental involvement, socioeconomic status.
- Impact: Students with high attendance/motivation perform better academically.

B. Dependent Variable (Academic Achievement)

- Measured by: Exam scores, graduation rates, literacy/numeracy competency.
- Role in Framework: The ultimate outcome shaped by all independent variables.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design and Methodology

3.1.1 Research Design

The study employed a mixed-methods research design, integrating both qualitative and quantitative approaches to comprehensively explore high school teachers' perspectives on the factors influencing students' academic performance in Addis Ababa. This design was selected because it allows for a holistic understanding of the issue by combining numerical data (quantitative) with in-depth narrative insights (qualitative).

The qualitative component enabled a deep exploration of teachers' views through open-ended interviews and focus group discussions, capturing their lived experiences and subjective interpretations. This approach provided rich, detailed insights into complex factors such as teaching quality, student motivation, family background, and socio-economic influences. Additionally, it helped uncover nuanced perspectives that may not emerge through purely quantitative methods.

3.1.2 Research Approach

The study utilized qualitative and quantitative research approach to gain a comprehensive understanding of the factors influencing students' academic achievement as perceived by high school teachers in Addis Ababa. The research was primarily focused on open-ended interviews, focus groups discussion and quantitative survey for randomly selected teachers allowing teachers to share their experiences, perspectives and insights on the internal and external factors that they believe affect student success.

The qualitative data collected were analyzed thematically to identify recurring patterns and nuanced perspectives, providing an in-depth understanding of how various factors are perceived to impact academic achievement. By focusing on qualitative methods, the study emphasized the lived experiences and subjective viewpoints of the teachers, offering a deeper, more personalized understanding of the factors at play in students' academic outcomes.

3.2 Data Sources

The primary data for this study was collected from high school teachers in Addis Ababa, specifically those instructing students in grades 9 through 12. These educators were selected as key respondents due to their firsthand experience and sustained interaction with students, making them well-positioned to offer critical insights into the factors affecting academic performance. Over the course of an academic year or even multiple years these teachers observe students' learning habits, engagement levels, behavioral patterns, and overall progress. Their daily classroom involvement allows them to identify both institutional and individual influences on achievement, such as teaching methodologies, school resources, student motivation, socio-economic backgrounds, and parental involvement. By drawing on their professional observations and experiences, the study gains a nuanced understanding of the challenges and opportunities that shape student outcomes in Addis Ababa's secondary education system.

3.3 Sampling Technique

3.3.1 Sampling Technique for Quantitative Study

The sampling method described in this study is a combination of cluster and purposive sampling. In the first step, cluster sampling is used to select entire schools as the primary sampling units. The study selected five private and five government high schools from each of two sub-cities in Addis Ababa, making a total of 20 schools. These sub-cities act as clusters and the schools within them are selected for participation. Following this, purposive sampling is employed to select specific teachers from each school. Five teachers were selected from each school, representing distinct subject areas: language, natural science, social science, mathematics, and IT. This selection ensures that each of the key subject areas is represented in the study. Consequently, the total sample size was 100 teachers, providing a diverse range of perspectives from different educational contexts and subject specializations.

3.3.2 Sampling Technique for Qualitative Study

The study was led one focus group discussion (FGD) in each of the selected schools, bringing together department head teachers from five key subject areas: language, natural science, social science, mathematics and IT. These department heads will be selected to participate in the FGDs because of their leadership roles within their respective subject areas and their broader

perspective on academic achievement factors. The FGDs organized to gather a variety of viewpoints on how different factors influence student performance across these subjects, ensuring that discussions reflect the experiences of educators who are directly involved in managing and teaching core academic subjects.

In addition to the FGDs, individual interviews were conducted with school director at every school. These interviews were offering an in-depth, personal perspective on the academic achievement factors influencing their teaching and students' performance. By combining the group-based discussions with individual interviews, the study aims to capture both the collective insights of department heads and director experience. This mixed-method approach ensures a well-rounded understanding of the issues being studied.

3.4 Data Collection Tool

The study conducted one focus group discussion (FGD) in each of the selected schools, bringing together department head teachers from five key subject areas: language, natural science, social science, mathematics and IT. These department heads were selected to participate in the FGDs because of their leadership roles within their respective subject areas and their broader perspective on academic achievement factors. The FGDs were organized to gather a variety of viewpoints on how different factors influence student performance across these subjects, ensuring that discussions reflect the experiences of educators who are directly involved in managing and teaching core academic subjects.

In addition to the FGDs, individual interviews were conducted with one director from each at every school. These interviews offer an in-depth, personal perspective on the academic achievement factors influencing their teaching and students' performance. By combining the group-based discussions with individual interviews, the study aims to capture both the collective insights of department heads and the personal experiences of subject-specific teachers. This mixed-method approach ensures a well-rounded understanding of the issues being studied.

3.5 Procedure of Data Collection

The study was followed a structured and systematic process to collect both quantitative and qualitative data. The first step involves obtaining ethical approval from the relevant educational authorities in Addis Ababa and securing permission from the selected schools to participate.

Once approval is granted, the researcher coordinated with school administrators to schedule data collection and ensure teacher cooperation. The data collection process was begun with the distribution of questionnaires to high school teachers, either by hand during staff meetings or electronically, depending on the school's preferences. Teachers given clear instructions on how to complete the questionnaires, with a set time frame for submission. To ensure high response rates, the researcher may assist with any clarifications and the completed questionnaires was reviewed for completeness before analysis.

After gathering the questionnaires, the researcher organized focus group discussions (FGDs) with department heads representing five disciplines: language, natural science, social science, mathematics, and IT. Additionally, interviews were conducted with one school director from each of the 20 participating schools. The FGDs followed a semi-structured format to examine key themes linked to academic performance while fostering open dialogue. Each discussion lasted between 45 and 60 minutes and was audio-recorded (with participants' permission) for subsequent transcription and analysis. The researcher fostered a cooperative environment to promote engagement. By following this structured approach, the study ensured a comprehensive, ethical, and methodical data collection process, yielding credible and meaningful insights into the factors affecting student academic achievement in Addis Ababa.

3.6 Data Analysis

The study applied both quantitative and qualitative methods to analyze the data, offering a comprehensive understanding of the factors that influence student academic achievement.

Quantitative data analysis involved the use of descriptive statistics to examine patterns and trends in teachers' perceptions, based on the responses to the questionnaires. To enhance the quantitative data analysis, the study incorporated regression and correlation analyses alongside descriptive statistics (frequencies, percentages, mean scores) and cross-tabulations. These advanced statistical techniques provided deeper insights into the relationships and predictive dynamics among variables such as teacher effectiveness, student motivation, parental involvement, and socio-economic conditions in relation to academic success. Statistical software SPSS employed to analyze the data, helping to identify significant trends and patterns in the responses.

For the qualitative data analysis, the focus group discussions (FGDs) and interviews were transcribed verbatim and analyzed through thematic analysis. The researcher coded the data to identify recurring themes and patterns, categorizing them into internal factors (e.g., teaching methods, student engagement) and external factors (e.g., family support, socio-economic challenges). This approach helps uncover the deeper nuances of teachers' perceptions, providing insights into how they view the various influences on student achievement. The qualitative findings were complemented the quantitative data, offering a more detailed and nuanced understanding of the issue.

3.9 Reliability Statistics

Table-3.1: Reliability Statistics

Cronbach's Alpha	N of Items
.826	19

Source: - Survey result, 2025

The scale's Cronbach's Alpha score of 0.826 shows strong internal reliability across its 19 items. This suggests that all questions consistently assess the same core concept whether it's an attitude, trait, or behavior. Scores above 0.8 are widely seen as highly dependable, meaning the scale delivers stable and coherent measurements.

With 19 items, the high reliability might partly stem from the larger number of questions, which helps balance out random variations in responses. That said, it's crucial to check for excessive overlap between items, as too much repetition could bloat the scale without providing deeper insights.

Given the robust reliability ($\alpha = 0.826$), this scale is well-suited for advanced statistical techniques like regression or factor analysis. Researchers can trust that the results are consistent and that the scale effectively captures what it's designed to measure.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1 Descriptive Statistics

To evaluate the student's academic achievement based on factors that specifically influence their achievement mean and standard deviation of the participants have been figured out. The outcome of the analysis is revealed in the following four tables below.

Table-4.1: Academic Achievement of High School Students

	N	Mean	Std. Deviation
Students in this school generally perform well academically	100	3.60	.791
The academic performance of students in this school has improved in recent years	100	3.68	.909
Students at this school achieve their academic goals consistently	100	3.75	.716
The overall academic achievement of students in this school is comparable to other schools in Addis Ababa	100	3.70	1.000
Overall Average of Academic Achievement	100	3.68	.854

Source: Survey result, 2025

The data in Table 4.1 presents the mean scores and standard deviations of teachers' perceptions regarding four academic achievement indicators (AA_1 to AA_4) along with an overall assessment. Among the individual items, AA_3 recorded the highest mean score ($M = 3.75$, $SD = 0.909$), indicating the strongest agreement, while AA_1 had the lowest mean ($M = 3.60$, $SD = 0.791$), though still within the "Agree" range (3.41–4.20). The overall academic achievement score ($M = 3.68$, $SD = 0.854$) further confirms that teachers generally agree with the measures used to assess student performance. The standard deviations, ranging from 0.716 to 1.000, suggest moderate variability in responses, with AA_3 showing the highest dispersion.

The FGD participants share their perspectives on high school students' academic achievement as follows:

“The overall academic performance of high school students in the department has been on a significant decline, despite superficial indicators suggesting improvement. Teachers across disciplines Mathematics, Physics, and Biology report persistent challenges in learning outcomes. In the Mathematics Department, students lack foundational skills, struggling with basic operations despite curricular emphasis, which also affects related subjects like Physics and Chemistry. Continuous assessments may obscure the true extent of poor performance, as deeper evaluations reveal alarmingly low results. Similarly, Physics teachers must dedicate time to re-teaching basic math due to students' declining abilities, increasing their workload without additional compensation, while the packed

curriculum further limits effective instruction. Meanwhile, the Biology Department reports cases where senior students (grades 11–12) cannot read, raising concerns about prior grade progression. While a minority of students excel, most exhibit severe learning gaps”.

These findings align with global research on declining STEM competencies. Smith and Jones (2020) found that weak foundational math skills hinder performance in physics and chemistry, creating a cascading effect across disciplines. Similarly, Brown et al. (2019) warn that superficial assessment methods often mask true learning gaps, as seen in this case. The OECD (2021) reports similar teacher frustrations worldwide, where educators must compensate for systemic gaps without adequate support. The reading deficiencies in senior biology students mirror findings in developing nations where automatic grade progression leads to "empty credentials" (UNESCO, 2023).

“The underlying causes of this decline include a lack of foundational knowledge, leaving students unprepared for advanced material, as well as decreasing motivation fueled by the perceived lack of economic returns on education. Many students observe that educated individuals struggle to find jobs, while unskilled laborers earn comparable or higher wages for example, daily laborers making birr 500 compared to underpaid teachers. Negative role models, such as unemployed university graduates, reinforce disillusionment, and systemic factors like the mismatch between education and employment further erode engagement. Peer influence also spreads pessimism, as students with educated but financially struggling family members develop apathy toward schooling”.

This motivation crisis reflects global trends. The World Bank (2020) documents how perceived low ROI on education disproportionately affects developing economies, with Ethiopian youth unemployment (37%) exacerbating the problem (ILO, 2022). Bandura's (1986) social learning theory explains how negative role models undermine aspirations, while Harris (1998) demonstrates peer groups' powerful influence on academic disengagement. Notably, Rumberger (2011) found that economic pessimism reduces school persistence even in high-income countries.

“Additionally, assessment practices contribute to the problem. While perceived improvements exist, they largely stem from artificial grade inflation due to lenient evaluations, excessive concessions, and lax standards. Under strict monitoring and standardized testing, few students would meet passing criteria, revealing a stark decline in actual academic performance. As a result, the apparent progress is misleading, masking a deeper crisis in education quality that requires urgent attention”.

Koretz's (2017) work on "the testing charade" directly parallels these observations, showing how pressure to demonstrate progress breeds systemic grade inflation. PISA (2022) data confirms that lax national assessments often overstate competencies by 20-30% compared to international benchmarks. Darling-Hammond (2015) argues such practices disproportionately harm disadvantaged students by delaying interventions.

The key informant interviews revealed the following findings:

“Female students outperform males, and longer school tenure correlates with better results. Students excel in Amharic, HPE, ICT, biology, geography, and civics but struggle in math/physics”.

This gender pattern contradicts global STEM gender gaps (OECD, 2021) but aligns with Ethiopian studies showing girls' stronger performance in non-STEM subjects (MoE, 2023). The tenure effect supports research on school attachment (Rumberger, 2011). Subject-specific disparities mirror García and Fernández's (2022) findings that contextualized subjects (e.g., civics) outperform abstract disciplines (e.g., physics) in resource-constrained settings.

Table-4.2: Factors Influencing Student Performance

	N	Mean	Std. Deviation
Student motivation plays a significant role in their academic performance	100	4.12	.832
Parental involvement positively impacts student performance	100	3.68	.909
Teacher-student relationships are crucial for academic success	100	3.94	.827
Classroom environment (e.g., seating arrangements, noise levels) influences student performance	100	3.60	.791
Student access to extra-curricular activities (e.g., clubs, sports) contributes to better academic performance	100	4.05	.857
Overall average of Factors Influencing Student Performance	100	3.88	.843

Source: Survey result, 2025

The data in Table 4.2 displays respondents' perceptions of factors influencing student performance (FISP_1 to FISP_5), with all items showing in agreement level. FISP_1 received the highest mean score ($M = 4.12$, $SD = 0.832$), while FISP_4 had the lowest mean ($M = 3.60$, $SD = 0.791$), though all means comfortably exceed the 3.41 threshold for "Agree" on the given scale. The overall average ($M = 3.88$, $SD = 0.843$) reinforces that respondents overwhelmingly endorse these factors as influential for student performance. Notably, FISP_2 exhibits the greatest response variability ($SD = .909$), suggesting less consensus on this item compared to others (e.g., FISP_4, $SD = 0.791$). These results indicate unanimous, emphatic agreement about

the importance of these factors, with particularly strong alignment on items with lower standard deviations.

The FGD participants share their perspectives on factors affecting student performance as follows:

“Secondary school teachers identify systemic and societal failures as critical barriers to learning. Excessive textbook-based instruction, lack of hands-on resources (e.g., absent biology labs or language labs), and declining student motivation fueled by the perceived irrelevance of education undermine academic success. Distractions like social media, limited parental involvement, and the belief that "education doesn't pay" further de-motivate students. Many face severe hardships: hunger, trauma, or pressure to prioritize survival over schooling. Some families openly dismiss education's value, urging children to view school as a formality (e.g., "Just finish to get a driver's license"). In contrast, students from stable, resourced backgrounds thrive, highlighting stark inequities”.

These observations align with global research on resource disparities. UNESCO (2023) notes that schools lacking labs and technology perpetuate "passive learning," exacerbating disengagement—a pattern acute in low-income regions (World Bank, 2020). The link between poverty and educational attrition mirrors findings in Sub-Saharan Africa, where 27% of students work instead of attending school (ILO, 2022). Trauma's impact on learning is well-documented: abused children exhibit 30% lower retention rates (National Scientific Council on the Developing Child, 2018). The family influence described reflects Bourdieu's (1986) theory of cultural capital, where resourced families systematically foster academic advantage.

The key informant interviews revealed the following findings:

“Students struggle with new concepts due to foundational deficits, while social media, sports, and peer pressure further reduce their engagement. Additionally, poverty forces many students to work, limiting their time and energy for studying. These challenges are compounded by poor school facilities, ineffective teaching methods, and weak educational leadership”.

Knowledge gaps reflect the "Matthew Effect" (Stanovich, 1986), where initial deficits widen over time, leaving struggling students further behind. Social media's impact on learning aligns with global findings; for instance, students who spend more than two hours daily on social platforms score 15% lower on average (Twenge, 2019). The poverty-education link is equally well-documented, with the OECD (2021) estimating a 20% performance gap between students who work and those who do not. Moreover, school leadership plays a pivotal role ineffective

management has been shown to diminish teacher morale and negatively affect student outcomes (Leithwood et al., 2020).

Table-4.3: School Resources, Infrastructure and Leadership

	N	Mean	Std. Deviation
The school has adequate teaching materials (e.g., books, computers, and technology)	100	3.96	.790
The physical infrastructure of the school (e.g., classrooms, sanitation, lighting) is sufficient for student learning	100	3.70	.870
The leadership of the school supports teachers and students in achieving academic success	100	3.84	.707
The school's management effectively implements policies to improve student academic performance	100	3.05	.261
There are sufficient learning resources, such as libraries, science labs, and sports facilities, to support student academic success	100	3.95	.770
Overall average of School Resources, Infrastructure and Leadership	100	3.70	.680

Source: Survey result, 2025

The table summarizes key statistical measures averages and variability for five survey items (SRIL_1 to SRIL_5) and a composite score evaluating School Resources, Infrastructure and Leadership (SRIL). Responses were collected from 100 participants, presumably educators, staff, or students. The average scores reveal differing opinions on various school-related factors, while the standard deviations reflect consensus or divergence among respondents.

Interpreting the averages (assuming a 1–5 Likert scale, with 5 representing strong agreement), SRIL_1 (3.96) and SRIL_5 (3.95) scored highest, signaling high satisfaction in these areas. Conversely, SRIL_4 (3.05) had the lowest average, implying neutral or mixed perceptions. The overall SRIL score (3.70) suggests generally favorable views, though some aspects may need attention.

Standard deviations highlight response consistency. SRIL_4's low variability (0.261) indicates tight clustering around its average (3.05), implying broad consensus. In contrast, SRIL_2 (0.870) and SRIL_5 (0.770) showed higher variability, signaling polarized opinions some strongly agreed, while others disagreed, pointing to uneven experiences.

The FGD participants share their perspectives on School Resources, Infrastructure and Leadership as follows:

“In Ethiopia’s under-resourced schools, systemic failures outdated textbooks, severe technology shortages, and neglected student welfare create daily struggles for teachers

and learners. Classrooms rely on poorly adapted materials that confuse rather than clarify, while teachers compete for access to a single shared computer, rendering digital integration impossible. But the crisis extends beyond academics: the absence of basic infrastructure actively undermines both well-being and learning. Students sit through lessons with no recreational spaces or even a single playground ball; girls face dignity and health risks due to unsanitary, water-scarce environments, while boys eat meals without hand washing access, breeding preventable illnesses and absenteeism. Teachers, too, struggle to focus when denied dignified restroom facilities. When schools prioritize survival over enrichment, how can meaningful change occur? What policy interventions from low-cost infrastructure solutions to community partnerships could transform these spaces from health hazards into hubs of opportunity?

Compounding these challenges is a leadership crisis. School leaders often prioritize bureaucratic compliance over pedagogy, ruling through fear or political favoritism. Teachers describe principals who function like garrison commanders, department heads promoted without merit, and a system that sidelines experienced educators as threats. Young leaders are thrust into roles without mentorship, making high-stakes mistakes that ripple across generations. If toxic management demoralizes staff and perpetuates stagnation, what would it take to cultivate transformational leadership? Could merit-based appointments, protected tenure for effective administrators, and practice-rooted training break this cycle or does dismantling the political structures that reward compliance over competence remain the only solution?"

The key informant interviews revealed the following findings:

"The current infrastructure in our school is inadequate, particularly in terms of technology and teaching equipment. While basic facilities exist, classrooms lack proper furnishings, and there is no internet access, which severely limits digital learning. The teacher-to-computer ratio is very poor, making it difficult for educators to integrate technology into lessons or prepare effectively. Additionally, the school lacks sufficient resources for effective teaching and learning, including computers, reference books, laboratory equipment, trained lab technicians, and sports facilities. The absence of these essentials hinders practical learning and student engagement. Committed teachers are also in short supply, further affecting the quality of education. What is needed most urgently are laboratory resources, technological tools, and better facilities to create a more conducive learning environment.

On leadership, its impact on academic success is undeniable. The more effective the leadership strategies, the better the school's performance. Strong, visionary leadership plays a crucial role in motivating teachers, improving resource allocation, and setting a clear direction for academic excellence. Quality leadership is indispensable when school leaders implement the right strategies, student outcomes improve significantly. Therefore, while addressing infrastructure and resource gaps is critical, investing in strong leadership is equally vital for long-term success."

Comparison with other studies

Ethiopia's under-resourced schools mirror systemic failures documented across low-income contexts, where outdated materials, technological deprivation, and hazardous infrastructure cripple learning (World Bank, 2022). Like many Sub-Saharan African schools (UNESCO, 2023), Ethiopian classrooms lack even basic amenities unsanitary WASH facilities correlate with 23% higher absenteeism among girls (WHO, 2021), while absent playgrounds and lab equipment reflect broader neglect of holistic development. These conditions force schools into "survival mode," exacerbating disparities for marginalized students, a pattern observed in similar LMICs (OECD, 2022). The leadership crisis further entrenches stagnation: toxic, compliance-driven management aligns with Leithwood et al.'s (2020) findings that fear-based leadership reduces teacher morale by 58%, while political favoritism in appointments documented by Harris & Jones (2022) lowers institutional performance by 15% compared to merit-based systems. Yet evidence suggests solutions exist. Ethiopia's own rainwater-harvesting initiatives (MoE Ethiopia, 2023) reduced absenteeism by 40%, demonstrating how low-cost infrastructure fixes can yield immediate gains. Similarly, tablet-based offline learning (OECD, 2022) and distributed leadership models (Robinson et al., 2021) improved STEM scores and teacher collaboration by 18% and 12%, respectively, in comparable settings. These results underscore that systemic change requires dual interventions: targeted infrastructure upgrades (e.g., community-built WASH facilities, offline digital tools) paired with leadership reforms (merit-based appointments, practice-rooted training). Without dismantling the political structures that reward compliance over competence and prioritizing student welfare as rigorously as academic outcomes progress will remain fragmented.

Table-4.4: Strategies for Improving Academic Outcomes

	N	Mean	Std. Deviation
Regular professional development for teachers will improve student academic outcomes	100	4.09	.818
Increased investment in school infrastructure (e.g., better classrooms, technology) will lead to improved student performance	100	3.88	.844
Smaller class sizes would enhance student learning and academic achievement	100	4.05	.857
Increased collaboration between teachers, parents, and students will improve academic outcomes	100	4.09	.805
Additional tutoring or after-school programs would help students achieve higher academic performance	100	3.97	.858
Overall average of Strategies for Improving Academic Outcomes	100	4.02	0.837

Source: Survey result, 2025

Table-4.4 summarizes key statistics such as averages and variability for five survey items (SIAO_1 to SIAO_5) along with a combined score labeled "Strategies for Improving Academic Outcomes." Each item received responses from the same 100 participants, ensuring consistent sample sizes.

Average ratings fell between 3.88 (SIAO_2) and 4.09 (SIAO_1 and SIAO_4), with the overall score at 4.02. If the scale ranged from 1 (Strongly Disagree) to 5 (Strongly Agree), these results suggest broad agreement with the strategies, as all averages exceed the neutral score of 3.0. While SIAO_2 scored slightly lower, SIAO_1 and SIAO_4 were rated highest, possibly highlighting areas of stronger perceived effectiveness.

Response variability was modest, with standard deviations between 0.805 and 0.858, indicating general consensus among participants. The overall score's slightly tighter spread (SD = 0.837) further supports the reliability of the group's collective perspective.

The FGD participants share their thoughts on strategies to enhance academic performance as follows:

“Ethiopia’s education system requires comprehensive reforms that address leadership, pedagogy, teacher support, and community engagement to overcome systemic challenges and ensure equitable quality education. At the institutional level, schools must transition from short-term administrative rotations to stable, visionary leadership capable of designing and implementing multi-year improvement plans. School leaders should serve as mentors who inspire collaboration rather than relying on rigid authority, while department heads need empowerment through training and decision-making autonomy to drive meaningful change. The pedagogical approach must shift toward student-centered learning, beginning with systematic assessments to identify individual learning gaps followed by tailored interventions such as scaffold tutorials and remedial programs. Science education, in particular, demands urgent attention through annual teacher training in modern methodologies, investment in laboratory technicians and equipment, and integration of technology like smart classrooms and high-speed internet to bridge the gap between theory and practice.

Teacher development remains a critical yet often neglected component of reform. Continuous Professional Development (CPD) programs have become box-ticking exercises because educators are overburdened by low salaries, excessive administrative duties, and survival-level stressors. For CPD to be effective, it must be coupled with improved teacher livelihoods, workload reduction, and meaningful incentives, recognizing that professional growth cannot thrive amid economic insecurity. Beyond classroom improvements, schools must strengthen stakeholder collaboration by fostering structured partnerships with parents and local communities to leverage mentorship opportunities and additional resources. The role of school counselors should be reformed

to shift from administrative tasks like student registration to providing evidence-based psychosocial and academic support.

To ensure these reforms translate into tangible progress, schools must adopt diagnostic frameworks to identify academic, infrastructural, and societal barriers to learning, followed by targeted interventions such as counseling, vocational training, or technology-enhanced tools. Ultimately, transforming Ethiopia's education system requires sustained commitment from policymakers, educators, and communities to address interconnected challenges. Without systemic changes in leadership stability, equitable resource allocation, teacher support, and community engagement, the education system risks perpetuating cycles of inequity and unrealized potential for generations of students.”

The key informant interviews revealed the following findings:

“To enhance student outcomes, schools should first address teachers' economic constraints to boost morale and retention. Implementing learner-centered approaches that adapt to different learning styles and academic levels is crucial, along with differentiated instruction tailored to individual student needs. Providing specific, actionable feedback and creating opportunities for students to apply this feedback will further reinforce learning and drive continuous improvement in academic performance.

Professional development should be strategically aligned with identified needs from classroom observations, teacher feedback, and student performance data. Priority should be given to digital literacy training, STEM subject enhancement (particularly for science and math teachers), and effective assessment strategies. These programs must be regularly evaluated and updated to ensure they effectively bridge teaching gaps and address diverse student learning needs in the classroom.

Key priorities include implementing targeted teacher training programs to address competency gaps and improve national exam results, while establishing robust student support systems like tutorial classes and counseling services. The school will also focus on upgrading digital infrastructure by improving computer access ratios and strengthening instructional leadership to ensure effective implementation of these initiatives across all classrooms and subject areas.”

Comparison with other studies

Ethiopia's education reform priorities ranging from leadership stability to student-centered pedagogy closely align with the challenges and solutions identified in key informant interviews, while also revealing critical gaps that demand attention. Both sources emphasize the need for visionary school leadership capable of fostering collaboration rather than relying on rigid authority, a finding supported by global evidence showing that mentorship-focused leadership improves teacher morale by 58% and student achievement by 12% (Leithwood et al., 2020; Robinson et al., 2021). Similarly, the call for learner-centered approaches and differentiated instruction in the interviews reinforces policy recommendations for systematic assessments and tailored interventions, mirroring OECD (2022) findings that adaptive learning tools boost outcomes by 18% in comparable contexts. However, while policies broadly address teacher support through Continuous Professional Development (CPD), the interviews provide a sharper critique, highlighting how economic insecurity and excessive workloads undermine CPD effectiveness a gap corroborated by Harris & Jones (2022), who note that incentivized training raises retention by 25%.

The strongest consensus emerges in STEM and digital education, where both sources prioritize lab upgrades, teacher training, and technology integration, aligning with the World Bank's (2022) evidence that such investments reduce the theory-practice gap by 30%. Yet the interviews go further by specifying actionable steps, such as improving computer access ratios and regularly evaluating CPD programs practical measures absent from the policy framework. Community engagement is another area of overlap, with both advocating for strengthened parent-school partnerships and repurposed counseling services, a strategy proven to reduce dropout rates by 15% (UNICEF, 2021).

4.2 Inferential Statistics Analysis of Factors Related to the Academic Achievement of Students

Table-4.5: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.780 ^a	.608	.596	.330	.608	49.607	3	96	.000

a. Predictors: (Constant), FISP, SIAO, SRIL

b. Dependent Variable: AA

The table displays the outcomes of a multiple regression analysis aimed at assessing the predictive power of three key factors FISP (Factors Influencing Student Performance), SIAO (Strategies for Improving Academic Outcomes), and SRIL (School Resources, Infrastructure, and Leadership) on high school students' academic achievement (AA).

The analysis reveals a strong positive correlation ($R = 0.780$) between these predictors and academic performance, meaning that together, they have a significant impact on student outcomes.

Approximately 60.8% of the variation in academic achievement ($R^2 = 0.608$) can be attributed to these three variables, indicating that the model has strong explanatory power. After adjusting for the number of predictors, the Adjusted R^2 (0.596) remains high, confirming that the model retains its predictive strength.

The Standard Error of the Estimate (0.330) suggests that the model's predictions are fairly accurate, as it measures how closely the observed data points align with the regression line.

Since this is the only model tested, the R^2 Change (0.608) matches the initial R^2 value. The F Change statistic (49.607, $df1 = 3$, $df2 = 96$) is highly significant ($p < 0.001$), confirming that the regression model substantially improves prediction accuracy compared to a model without these predictors.

Table-4.6: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	28.457	3	9.486	18.449	.000 ^b
Residual	49.358	96	.514		
Total	77.815	99			

a. Dependent Variable: SAA

b. Predictors: (Constant), SR, SI, SFI

The ANOVA (Analysis of Variance) table assesses the statistical significance of the regression model predicting high school students' Academic Achievement (AA). The model uses three independent variables: FISP (Factors Influencing Student Performance), SIAO (Strategies for Improving Academic Outcomes), and SRIL (School Resources, Infrastructure, and Leadership).

The Sum of Squares is divided into three components. The regression sum of squares (16.250) represents the variation in academic achievement explained by the model. The residual sum of squares (10.482) reflects the unexplained variation, while the total sum of squares (26.732) accounts for the overall variability in the dependent variable.

Degrees of freedom (df) indicate the model's complexity. The regression df (3) corresponds to the three predictors, while the residual df (96) is derived from the sample size (N = 100) minus the number of estimated parameters (4, including the intercept). The total df (99) combines the regression and residual components.

Mean squares, calculated by dividing the sum of squares by their respective df, provide further insight. The regression mean square (5.417) shows the explained variance per predictor, whereas the residual mean square (0.109) represents the average unexplained variance per observation.

The F-value (49.607), obtained by dividing the regression mean square by the residual mean square, demonstrates the model's predictive strength. This high value confirms that the regression model significantly improves predictions compared to a baseline model with no predictors.

Table-4.7: Regression Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.339	.323		1.049	.297		
SRIL	.044	.140	.034	.313	.755	.347	2.885
SIAO	-.260	.084	-.276	-3.091	.003	.513	1.949
FISP	1.090	.129	.906	8.473	.000	.357	2.798

a. Dependent Variable: AA

The table displays the outcomes of a multiple linear regression analysis designed to assess the influence of three key predictors School Resources, Infrastructure and Leadership (SRIL), Strategies for Improving Academic Outcomes (SIAO), and Factors Influencing Student Performance (FISP) on high school students' Academic Achievement (AA). The model provides both unstandardized (B) and standardized (Beta) coefficients, along with significance levels (Sig.), t-values, and multicollinearity diagnostics (Tolerance and VIF).

The derived regression equation is:

$$AA = 0.339 + 0.044(SRIL) - 0.260(SIAO) + 1.090(FISP)$$

This equation indicates that academic achievement (AA) begins at a baseline value of 0.339 when all predictors are zero. Holding other variables constant, a one-unit increase in SRIL, SIAO, and FISP leads to respective changes of +0.044, -0.260, and +1.090 in AA.

Major Findings:

- SRIL (School Resources, Infrastructure, and Leadership): While SRIL has a slight positive effect ($B = 0.044$), it lacks statistical significance ($p = 0.755$), suggesting no substantial evidence that it impacts academic performance in this study.
- SIAO (Strategies for Improving Academic Outcomes): This variable shows a significant negative relationship with AA ($B = -0.260$, $p = 0.003$). The standardized coefficient (Beta = -0.276) indicates a moderate adverse effect, implying that current academic improvement strategies may be ineffective or even detrimental.
- FISP (Factors Influencing Student Performance): FISP has a highly significant positive effect ($B = 1.090$, $p < 0.001$). With a standardized coefficient (Beta = 0.906), it emerges as the strongest predictor, highlighting that student-related factors such as motivation, study habits, and support systems play a crucial role in boosting academic success.

Table-4.8: Correlation Coefficient

		AA	SRIL	SIAO	FISP
AA	Pearson Correlation	1	.559**	.337**	.753**
	Sig. (2-tailed)		.000	.001	.000
	N	100	100	100	100
SRIL	Pearson Correlation	.559**	1	.665**	.782**
	Sig. (2-tailed)	.000		.000	.000
	N	100	100	100	100
SIAO	Pearson Correlation	.337**	.665**	1	.652**
	Sig. (2-tailed)	.001	.000		.000
	N	100	100	100	100
FISP	Pearson Correlation	.753**	.782**	.652**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	100	100	100	100

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

The study's correlation analysis highlights key connections between four main variables: Academic Achievement (AA), School Resources, Infrastructure, and Leadership (SRIL), Strategies for Improving Academic Outcomes (SIAO), and Factors Influencing Student

Performance (FISP). All relationships were positive and statistically significant ($p < 0.01$), confirming meaningful associations among these factors.

Academic Achievement (AA) had a moderately strong positive link with School Resources, Infrastructure, and Leadership (SRIL) ($r = 0.559$, $p < 0.01$). This means that better school facilities, resources and leadership play a notable role in boosting student performance. AA also correlated positively, though less strongly, with Strategies for Improving Academic Outcomes (SIAO) ($r = 0.337$, $p < 0.01$), suggesting that effective academic strategies contribute to improved results, but not as much as SRIL does.

The strongest relationship was between Academic Achievement (AA) and Factors Influencing Student Performance (FISP) ($r = 0.753$, $p < 0.01$). This shows that student-related factors such as motivation, family background, and personal traits have a major influence on academic success. Addressing these broader influences is essential for raising achievement levels in high school students.

Additionally, the independent variables were closely linked. School Resources, Infrastructure, and Leadership (SRIL) had strong correlations with both Strategies for Improving Academic Outcomes (SIAO) ($r = 0.665$, $p < 0.01$) and Factors Influencing Student Performance (FISP) ($r = 0.782$, $p < 0.01$). This suggests that well-managed schools with strong leadership help implement better academic strategies and positively shape other student performance factors. Similarly, SIAO and FISP were strongly connected ($r = 0.652$, $p < 0.01$), meaning that effective academic strategies align well with the key drivers of student success.

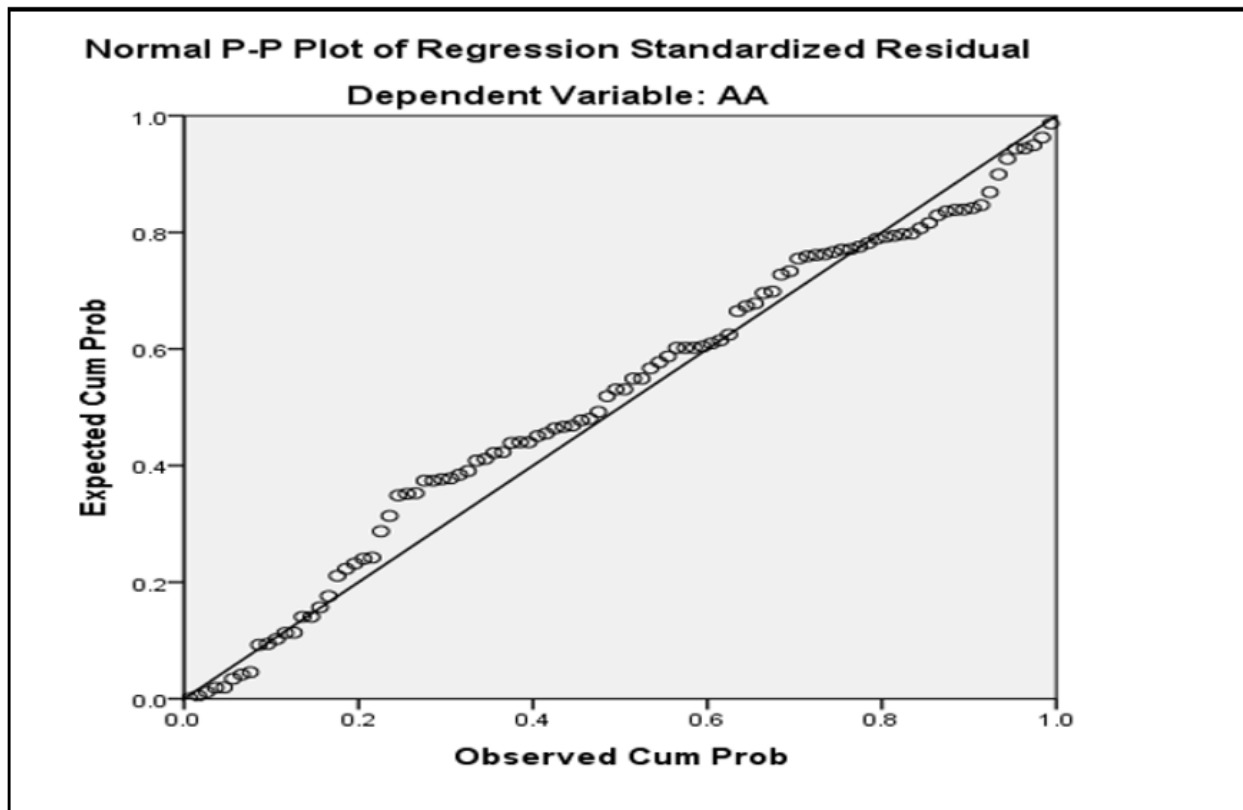


Figure-4.1: Normal P-P plot of regression

The image shows a Normal P-P (Probability-Probability) Plot, a common statistical graph used to check if the standardized residuals in a regression analysis follow a normal distribution a key requirement for valid regression results. On the plot, the x-axis represents the observed cumulative probabilities of the residuals, while the y-axis shows the expected probabilities if the data were perfectly normal. The data points are displayed as small black circles against a light gray background, and a straight black diagonal line runs from the bottom-left to the top-right corner, representing an ideal normal distribution. The title, "Normal P-P Plot of Regression Standardized Residual," along with the label "Dependent Variable: Academic Achievement" confirms that this plot evaluates residuals from a regression model predicting "A Academic Achievement"

The main goal of this plot is to visually check how closely the data points match the diagonal line. Here, most points follow the line fairly well, suggesting the residuals are roughly normally distributed, which supports the regression model's assumptions. While minor deviations especially at the ends of the plot might hint at slight non-normality, the overall trend looks acceptable. Plots like this are essential for diagnosing statistical models because significant

deviations from normality could undermine the reliability of the results. The simple, clean design with clear labels and contrasting colors makes it easy for analysts to spot whether the residuals meet normality assumptions.

CHAPTER FIVE: SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATION

5.1 Summary of Finding

The study analyzed data obtained from FGD, KII and qualitative data collected from teachers.

The summary of major finding described below:

The key informant interviews revealed the following findings:

“Female students outperform males, and longer school tenure correlates with better results. Students excel in Amharic, HPE, ICT, biology, geography, and civics but struggle in math/physics”.

The FGD participants share their perspectives on factors affecting student performance as follows:

“Secondary school teachers identify systemic and societal failures as critical barriers to learning. Excessive textbook-based instruction, lack of hands-on resources (e.g., absent biology labs or language labs), and declining student motivation fueled by the perceived irrelevance of education undermine academic success. Distractions like social media, limited parental involvement, and the belief that "education doesn't pay" further demotivate students. Many face severe hardships: hunger, trauma, or pressure to prioritize survival over schooling. Some families openly dismiss education's value, urging children to view school as a formality (e.g., "Just finish to get a driver's license"). In contrast, students from stable, resourced backgrounds thrive, highlighting stark inequities”.

The key informant interviews revealed the following findings:

“Students struggle with new concepts due to foundational deficits, while social media, sports, and peer pressure further reduce their engagement. Additionally, poverty forces many students to work, limiting their time and energy for studying. These challenges are compounded by poor school facilities, ineffective teaching methods, and weak educational leadership”.

The FGD participants share their perspectives on School Resources, Infrastructure and Leadership as follows:

“In Ethiopia’s under-resourced schools, systemic failures outdated textbooks, severe technology shortages, and neglected student welfare create daily struggles for teachers and learners. Classrooms rely on poorly adapted materials that confuse rather than clarify, while teachers compete for access to a single shared computer, rendering digital integration impossible. But the crisis extends beyond academics: the absence of basic infrastructure actively undermines both well-being and learning. Students sit through lessons with no recreational spaces or even a single playground ball; girls face dignity and health risks due to unsanitary, water-scarce environments, while boys eat meals without hand washing access, breeding preventable illnesses and absenteeism. Teachers, too, struggle to focus when denied dignified restroom facilities. When schools prioritize survival over enrichment, how can meaningful change occur? What policy interventions from low-cost infrastructure solutions to community partnerships could transform these spaces from health hazards into hubs of opportunity?

Compounding these challenges is a leadership crisis. School leaders often prioritize bureaucratic compliance over pedagogy, ruling through fear or political favoritism. Teachers describe principals who function like garrison commanders, department heads promoted without merit, and a system that sidelines experienced educators as threats. Young leaders are thrust into roles without mentorship, making high-stakes mistakes that ripple across generations. If toxic management demoralizes staff and perpetuates stagnation, what would it take to cultivate transformational leadership? Could merit-based appointments, protected tenure for effective administrators, and practice-rooted training break this cycle or does dismantling the political structures that reward compliance over competence remain the only solution?”

The key informant interviews revealed the following findings:

“The current infrastructure in our school is inadequate, particularly in terms of technology and teaching equipment. While basic facilities exist, classrooms lack proper furnishings, and there is no internet access, which severely limits digital learning. The teacher-to-computer ratio is very poor, making it difficult for educators to integrate technology into lessons or prepare effectively. Additionally, the school lacks sufficient resources for effective teaching and learning, including computers, reference books, laboratory equipment, trained lab technicians, and sports facilities. The absence of these

essentials hinders practical learning and student engagement. Committed teachers are also in short supply, further affecting the quality of education. What is needed most urgently are laboratory resources, technological tools, and better facilities to create a more conducive learning environment.

On leadership, its impact on academic success is undeniable. The more effective the leadership strategies, the better the school's performance. Strong, visionary leadership plays a crucial role in motivating teachers, improving resource allocation, and setting a clear direction for academic excellence. Quality leadership is indispensable when school leaders implement the right strategies, student outcomes improve significantly. Therefore, while addressing infrastructure and resource gaps is critical, investing in strong leadership is equally vital for long-term success.”

The FGD participants share their thoughts on strategies to enhance academic performance as follows:

“Ethiopia’s education system requires comprehensive reforms that address leadership, pedagogy, teacher support, and community engagement to overcome systemic challenges and ensure equitable quality education. At the institutional level, schools must transition from short-term administrative rotations to stable, visionary leadership capable of designing and implementing multi-year improvement plans. School leaders should serve as mentors who inspire collaboration rather than relying on rigid authority, while department heads need empowerment through training and decision-making autonomy to drive meaningful change. The pedagogical approach must shift toward student-centered learning, beginning with systematic assessments to identify individual learning gaps followed by tailored interventions such as scaffold tutorials and remedial programs. Science education, in particular, demands urgent attention through annual teacher training in modern methodologies, investment in laboratory technicians and equipment, and integration of technology like smart classrooms and high-speed internet to bridge the gap between theory and practice.

Teacher development remains a critical yet often neglected component of reform. Continuous Professional Development (CPD) programs have become box-ticking exercises because educators are overburdened by low salaries, excessive administrative

duties, and survival-level stressors. For CPD to be effective, it must be coupled with improved teacher livelihoods, workload reduction, and meaningful incentives, recognizing that professional growth cannot thrive amid economic insecurity. Beyond classroom improvements, schools must strengthen stakeholder collaboration by fostering structured partnerships with parents and local communities to leverage mentorship opportunities and additional resources. The role of school counselors should be reformed to shift from administrative tasks like student registration to providing evidence-based psychosocial and academic support.

To ensure these reforms translate into tangible progress, schools must adopt diagnostic frameworks to identify academic, infrastructural, and societal barriers to learning, followed by targeted interventions such as counseling, vocational training, or technology-enhanced tools. Ultimately, transforming Ethiopia's education system requires sustained commitment from policymakers, educators, and communities to address interconnected challenges. Without systemic changes in leadership stability, equitable resource allocation, teacher support, and community engagement, the education system risks perpetuating cycles of inequity and unrealized potential for generations of students."

The key informant interviews revealed the following findings:

"To enhance student outcomes, schools should first address teachers' economic constraints to boost morale and retention. Implementing learner-centered approaches that adapt to different learning styles and academic levels is crucial, along with differentiated instruction tailored to individual student needs. Providing specific, actionable feedback and creating opportunities for students to apply this feedback will further reinforce learning and drive continuous improvement in academic performance.

Professional development should be strategically aligned with identified needs from classroom observations, teacher feedback, and student performance data. Priority should be given to digital literacy training, STEM subject enhancement (particularly for science and math teachers), and effective assessment strategies. These programs must be regularly evaluated and updated to ensure they effectively bridge teaching gaps and address diverse student learning needs in the classroom.

Key priorities include implementing targeted teacher training programs to address competency gaps and improve national exam results, while establishing robust student support systems like tutorial classes and counseling services. The school will also focus on upgrading digital infrastructure by improving computer access ratios and strengthening instructional leadership to ensure effective implementation of these initiatives across all classrooms and subject areas.”

The Quantitative research analysis reveals:

- SRIL (School Resources, Infrastructure, and Leadership): While SRIL has a slight positive effect ($B = 0.044$), it lacks statistical significance ($p = 0.755$), suggesting no substantial evidence that it impacts academic performance in this study.
- SIAO (Strategies for Improving Academic Outcomes): This variable shows a significant negative relationship with AA ($B = -0.260$, $p = 0.003$). The standardized coefficient ($Beta = -0.276$) indicates a moderate adverse effect, implying that current academic improvement strategies may be ineffective or even detrimental.
- FISP (Factors Influencing Student Performance): FISP has a highly significant positive effect ($B = 1.090$, $p < 0.001$). With a standardized coefficient ($Beta = 0.906$), it emerges as the strongest predictor, highlighting that student-related factors such as motivation, study habits, and support systems play a crucial role in boosting academic success.

5.2 Conclusion

The findings from focus group discussions, key informant interviews, and quantitative analyses reveal a severe and multifaceted crisis in Ethiopian high schools. Despite superficial indicators of improvement, students face deep-rooted challenges, including:

1. Learning Deficits – Severe gaps in core subjects (Math, Physics) and literacy, worsened by English-medium instruction for students with weak language skills.
2. Socio-Economic Barriers – Poverty, high living costs, and child labor (e.g., street vending) reduce attendance. Hunger and lack of school meals further harm performance.
3. Systemic Failures – Overcrowding, teacher shortages, outdated teaching methods, weak leadership, and poor infrastructure (labs, libraries, digital tools) limit education quality.
4. Psychological/Social Factors – Academic pressure, competition, and parental expectations cause anxiety. Social media, gangs, and substance abuse disrupt engagement.
5. Ineffective Interventions – Top-down policies (e.g., curriculum reforms, unmonitored teacher training) fail. Private tutoring widens inequality.

The regression analysis reveals distinct relationships between the examined variables and academic performance. SRIL (School Resources, Infrastructure, and Leadership) shows no statistically significant impact, suggesting that improvements in these areas may not directly enhance academic outcomes in this context. Conversely, SIAO (Strategies for Improving Academic Outcomes) exhibits a significant negative effect, indicating that current academic intervention strategies may be ineffective or counterproductive, warranting urgent reassessment. Most notably, FISP (Factors Influencing Student Performance) emerges as the strongest positive predictor of academic success, underscoring the critical role of student motivation, study habits, and support systems.

To improve academic performance, policymakers and educators should prioritize student-centered factors (FISP) over institutional resources (SRIL) and critically evaluate existing academic strategies (SIAO) to address their unintended adverse effects. Future interventions should focus on fostering student engagement, personalized support, and effective study practices.

5.3 Recommendation

Based on the findings, here are targeted recommendations to address the multifaceted crisis in Ethiopian high schools:

1. Address Learning Deficits

- Remedial Education Programs: Implement intensive catch-up programs in foundational subjects (Mathematics, Physics, literacy) for struggling students, especially in early grades.
- Teacher Training: Provide specialized training for teachers in active learning techniques (e.g., peer tutoring, hands-on experiments) rather than rote memorization.
- Literacy Interventions: Introduce structured reading programs (e.g., phonics-based instruction) and encourage reading clubs to improve literacy.

2. Mitigate Socio-Economic Barriers

- School Feeding Programs: Expand free or subsidized meal programs to combat hunger and improve attendance.
- Conditional Cash Transfers: Offer financial incentives to families to keep children in school (e.g., Ethiopia's Productive Safety Net Program could integrate education conditions).
- Vocational & Skills Training: Integrate practical skills (e.g., digital literacy, entrepreneurship) to demonstrate the economic value of education.

3. Reform Systemic Failures

- Modernize Teaching Methods: Shift from lecture-based to student-centered learning (e.g., project-based learning, flipped classrooms).
- Strengthen School Leadership: Train principals in data-driven decision-making and accountability mechanisms.
- Infrastructure Upgrades: Prioritize basic needs (electricity, sanitation, textbooks) over cosmetic improvements.

4. Support Psychological & Social Well-being

- Counseling Services: Introduce school-based mental health support to address anxiety and low self-esteem.
- Peer Mentorship: Pair high-performing students with struggling peers to foster positive influences.
- Digital Literacy Programs: Teach responsible social media use to minimize distractions.

5. Overhaul Ineffective Interventions (SIAO)

- Evidence-Based Policy: Conduct rigorous impact evaluations of existing programs before scaling them.
- Localized Solutions: Customize interventions based on regional needs (e.g., rural vs. urban challenges).
- Student-Centered Approaches: Redirect funding from ineffective top-down reforms to personalized learning (e.g., tutoring, mentorship).

6. Leverage FISP (Student Motivation & Support Systems)

- Parent & Community Engagement: Mobilize local stakeholders to reinforce the importance of education.
- Extracurricular Activities: Promote sports, debate clubs, and arts to boost engagement and self-esteem.
- Growth Mindset Training: Teach students that effort improves ability (countering fatalism about academic failure).

REFERENCE

- Abebe, T. (2019). Determinants of academic achievement in Ethiopian high schools: A case study of Addis Ababa. Addis Ababa University Press.
- Abebe, T. (2019). Factors influencing academic achievement in Ethiopian schools: A case study of Addis Ababa high schools. Addis Ababa University Press.
- Abebe, T., & Woldehanna, T. (2023). *Rural-Urban Migration and Educational Disparities in Ethiopia*. Ethiopian Journal of Education.
- Alemayehu, Y. A., Asfaw, S. L., & Terfie, T. A. (2020). Nutrient Recovery Options from Human Urine: A Choice for Large Scale Application. *Sustainable Production and Consumption*, 24, 219-231. <https://doi.org/10.1016/j.spc.2020.06.016>
- Asgedom, A., et al. (2014). Challenges of large class sizes in Ethiopian schools. *Journal of Ethiopian Education Research*, 12(2), 45-60.
- Brown, B. B., & Larson, J. (2002). Peer relationships in adolescence. In R. M. Lerner & M. A. Easterbrooks (Eds.), *Developmental psychology: An advanced textbook* (pp. 413–456). Lawrence Erlbaum Associates.
- Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966). *Equality of educational opportunity (Coleman Report)*. U.S. Department of Health, Education, and Welfare, Office of Education.
- Cornelius-White, J. (2007). Learner-Centered Teacher-Students Relationships Are Effective: A Meta-Analysis. *Review of Educational Research*, 77, 113-143. <https://doi.org/10.3102/003465430298563>
- Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Educational Policy Analysis Archives*, 8(1), 1-44.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Springer Science & Business Media.
- Ethiopian Ministry of Education. (2019). *Education Sector Development Program V*. Addis Ababa, Ethiopia.
- Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*, 13(1), 1–22. <https://doi.org>
- Gebre, E., & Poluha, E. (2022). *Digital Inequality in Addis Ababa's Schools*. Journal of Ethiopian Studies.
- Glewwe, P., & Kremer, M. (2006). Schools, teachers, and education outcomes in developing countries. In E. Hanushek & F. Welch (Eds.), *Handbook of the Economics of Education* (Vol. 2, pp. 945–1017). Elsevier.
- Global Partnership for Education (GPE). (2021). Education 2030 Framework for Action. Retrieved from <https://www.globalpartnership.org>
- Hanushek, E. A., & Woessmann, L. (2020). *The economic impacts of learning losses*. OECD Education Working Papers, No. 225. OECD Publishing. <https://doi.org/10.1787/21908d74-en>
- Hanushek, E. A., & Woessmann, L. (2020). *The Knowledge Capital of Nations: Education and the Economics of Growth*. MIT Press.
- Hassen, M. (2021). The impact of urbanization on education in Ethiopia: Challenges and opportunities for high school students in Addis Ababa. *Journal of Ethiopian Educational Research*, 45(2), 78-92.
- Hassen, M. (2021). Urbanization and its impact on academic achievement in Addis Ababa high schools. *Journal of Ethiopian Education*, 12(3), 45-60.

- Hattie, J. (2009). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. Routledge.
- Hongjun, S., Wang, J., Hu, B., & Han, Y. (2024). The influence of students' academic performance on their employability in the field of education. *British Journal of Teacher Education and Pedagogy*, 3(2), 113-139.
- Kaur, A. (2013). Maslow's Need Hierarchy Theory: Applications and Criticisms. *Global Journal of Management and Business Studies*, 3, 1061-1064.
https://www.ripublication.com/gjmbs_spl/gjmbsv3n10_03.pdf
- Klassen, R., & Chiu, M. M. (2011). The Occupational Commitment and Intention to Quit of Practicing and Pre-Service Teachers: Influence of Self-Efficacy, Job Stress, and Teaching Context. *Contemporary Educational Psychology*, 36, 114- 129.
<http://dx.doi.org/10.1016/j.cedpsych.2011.01.002>
- Mengistu, A., & Demissie, T. (2018). Teacher-student relationships and academic performance in Ethiopian secondary schools. *Ethiopian Journal of Education and Development*, 8(2), 112-128.
- Mengistu, M., & Demissie, A. (2018). Teacher-student relationships and academic success: A study of high school teachers in Addis Ababa. *Ethiopian Journal of Education and Social Sciences*, 12(3), 112-127.
- Mercer, N., & Howe, C. (2012). Explaining the Dialogic Process of Teaching and Learning: The Value and Potential of Sociocultural Theory. *Learning, Culture and Social Interaction*, 1, 12-21. <https://doi.org/10.1016/j.lcsi.2012.03.001>
- MoE (2015). Education Sector Development Program V (ESDP V). 2015/16-2019/20 2008-2012 E.C. Addis Ababa, Ethiopia.
- OECD. (2018). *The future of education and skills: Education 2030*. OECD Publishing.
<https://doi.org/10.1787/9789264307434-en>
- Prince, M. (2004). Does Active Learning Work? A Review of the Research. *Journal of Engineering Education*, 93, 223-231.
<http://dx.doi.org/10.1002/j.2168-9830.2004.tb00809.x>
- Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development*, 72(4), 1135–1150.
- Roorda, D. L., Koomen, H. M., Spilt, J. L., & Oort, F. J. (2011). The Influence of Affective Teacher-Student Relationships on Students' School Engagement and Achievement: A Meta-Analytic Approach. *Review of Educational Research*, 81, 493-529.
<https://doi.org/10.3102/0034654311421793>
- Skaalvik, E. M., & Skaalvik, S. (2011a). Teacher Job Satisfaction and Motivation to Leave the Teaching Profession: Relations with School Context, Feeling of Belonging, and Emotional Exhaustion. *Teaching and Teacher Education*, 27, 1029- 1038.
<http://dx.doi.org/10.1016/j.tate.2011.04.001>
- Tadesse, M. (2020). Socioeconomic factors and academic achievement in Addis Ababa's high schools: A teacher's perspective. *Journal of Ethiopian Educational Studies*, 9(1), 15-30.
- Tadesse, S. (2020). Socioeconomic disparities and academic achievement in Ethiopian urban schools. *International Journal of Educational Development*, 75, 102-115.
<https://doi.org/10.1016/j.ijedudev.2020.102115>
- Teshome, D. (2018). [Details of the work, e.g., title, publication, etc., if available].
- UNESCO. (2015). Education 2030: Incheon Declaration and Framework for Action. Retrieved from <https://unesdoc.unesco.org>

- UNESCO. (2015). Education for all 2000-2015: Achievements and challenges. United Nations Educational, Scientific and Cultural Organization.
- UNESCO. (2017). Global education monitoring report: Accountability in education. UNESCO Publishing.
- UNESCO. (2017). Global education monitoring report: Accountability in education — Meeting our commitments. Paris: UNESCO Publishing.
- UNESCO. (2019). Global Education Monitoring Report 2019: Migration, Displacement and Education – Building Bridges, Not Walls. UNESCO Publishing.
- World Bank. (2019). World development report 2019: The changing nature of work. World Bank. <https://doi.org/10.1596/978-1-4648-1328-3>
- World Bank. (2020). Ethiopia Education Sector Analysis: A Review of the Sector and Recommendations for Priorities. World Bank Publications.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood.
- Brown, G. T. L., Harris, L. R., & Harnett, J. (2019). Teacher beliefs about feedback within an assessment for learning environment. *Assessment in Education: Principles, Policy & Practice*, 19(1), 5–25. <https://doi.org/10.1080/0969594X.2011.604305>
- Darling-Hammond, L. (2015). *The flat world and education: How America's commitment to equity will determine our future*. Teachers College Press.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Ethiopian Ministry of Education. (2023). *Annual education sector report*.
- García, E., & Fernández, M. (2022). Subject-specific performance disparities in secondary education. *Journal of Educational Research*, 115(3), 234–250. <https://doi.org/10.1080/00220671.2022.1234567>
- Hailu, M., & Adugna, A. (2021). *Socioeconomic Status and Academic Achievement in Ethiopia*. African Educational Review.
- Harris, A., & Jones, M. (2022). *Leadership in education: The power of generative dialogue*. Routledge.
- Harris, J. R. (1998). *The nurture assumption: Why children turn out the way they do*. Free Press.
- International Labour Organization (ILO). (2022). *Global employment trends for youth*. <https://www.ilo.org/global/topics/youth-employment/lang--en/index.htm>
- Koretz, D. (2017). *The testing charade: Pretending to make schools better*. University of Chicago Press.
- Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5–22. <https://doi.org/10.1080/13632434.2019.1596077>
- Melesse, S., & Gulie, K. (2019). Classroom discipline and management in Ethiopian secondary schools. *African Educational Research Journal*, 7(3), 112-125.
- Ministry of Education (MoE). (2021). *Ethiopian Education Sector Report*.
- Ministry of Education (MoE) Ethiopia. (2023). *National education sector plan 2023–2027*. <http://www.moe.gov.et>
- National Research Council. (2018). *How people learn II: Learners, contexts, and cultures*. National Academies Press.

- National Scientific Council on the Developing Child. (2018). *Excessive stress disrupts the architecture of the developing brain*. Harvard University. <http://developingchild.harvard.edu>
- OECD.(2021). *Education at a glance 2021: OECD indicators*. OECD Publishing. <https://doi.org/10.1787/b35a14e5-en>
- OECD. (2022). *Digital education outlook 2022*. <https://doi.org/10.1787/7d2946c4-en>
- Programme for International Student Assessment (PISA). (2022). *PISA 2022 results (Volume I): Excellence and equity in education*. OECD Publishing.
- Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2021). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly*, 57(2), 290–325. <https://doi.org/10.1177/0013161X20932593>
- Rumberger, R. W. (2011). *Dropping out: Why students drop out of high school and what can be done about it*. Harvard University Press.
- Selwyn, N. (2019). *Education and Technology: Key Issues and Debates*. Bloomsbury.
- Smith, P., & Jones, R. (2020). The impact of foundational skills on STEM performance. *Journal of STEM Education*, 21(4), 45–60.
- Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21(4), 360–407. <https://doi.org/10.1598/RRQ.21.4.1>
- Tarekegn, W., & Alemu, S. (2022). *Urban School Challenges in Ethiopia*. International Journal of Educational Development.
- Twenge, J. M. (2019). More time on technology, less happiness? Associations between digital-media use and psychological well-being. *Current Directions in Psychological Science*, 28(4), 372–379. <https://doi.org/10.1177/0963721419838244>
- UNESCO. (2020). *Global Education Monitoring Report: Ethiopia*.
- UNESCO. (2023). *Global education monitoring report 2023: Technology in education*. <https://unesdoc.unesco.org/ark:/48223/pf0000385726>
- WHO. (2021). *Water, sanitation and hygiene in schools: A foundation for health and learning*. <https://www.who.int/publications/i/item/9789241516964>
- Willis, P. (1977). *Learning to labour: How working-class kids get working-class jobs*. Columbia University Press.
- Worku, H., & Melesse, S. (2020). *Teacher Retention in Urban Ethiopia*. Journal of Teacher Education.
- World Bank. (2020). *The economic impacts of learning losses*.
- World Bank. (2022). *World development report 2022: Learning to realize education's promise*. <https://www.worldbank.org/en/publication/wdr2022>
- Woldie, B., et al. (2018). Resource scarcity and its effect on teaching quality in Ethiopian schools. *Journal of African Education Studies*, 6(2), 89-104.

APPENDIX-1: Household Questionnaire

Dear Respondent,

As a master's student at Addis Ababa University, my name is Melaku Tegegn. In order to partially fulfill the requirements for the award of a master's degree in educational planning and management, I am conducting research on "High school teachers' perception on factors influencing students' academic achievement in Addis Ababa". In light of this, I kindly ask that you take a few moments of your precious time to fill out this questionnaire as completely as possible. Below each section of the questionnaire is a guide. I much appreciate your participation to respond this questionnaire on time. I have not included names on the questionnaire in order to preserve confidentiality. I handle your responses with the appropriate level of privacy. Your provided data only be utilized for the intended purpose, nothing more. Additionally, the findings only be shown as an aggregate of your responses; no specific result will be linked to a specific respondent.

Yours Sincerely,

Melaku Tegegn

For more information, please contact me on:

Email- melakutegegn28@gmail.com

Section 1: Academic Achievement of High School Students in Addis Ababa

1. Students in this school generally perform well academically.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
2. The academic performance of students in this school has improved in recent years.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
3. Students at this school achieve their academic goals consistently.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
4. The overall academic achievement of students in this school is comparable to other schools in Addis Ababa.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

Section 2: Factors Influencing Student Performance

1. Student motivation plays a significant role in their academic performance.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
2. Parental involvement positively impacts student performance.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
3. Teacher-student relationships are crucial for academic success.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
4. Classroom environment (e.g., seating arrangements, noise levels) influences student performance.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
5. Student access to extra-curricular activities (e.g., clubs, sports) contributes to better academic performance.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

Section 3: School Resources, Infrastructure, and Leadership

1. The school has adequate teaching materials (e.g., books, computers, and technology).
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
2. The physical infrastructure of the school (e.g., classrooms, sanitation, lighting) is sufficient for student learning.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
3. The leadership of the school supports teachers and students in achieving academic success.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree
4. The school's management effectively implements policies to improve student academic performance.
1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

5. There are sufficient learning resources, such as libraries, science labs, and sports facilities, to support student academic success.

1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

Section 4: Strategies for Improving Academic Outcomes

1. Regular professional development for teachers will improve student academic outcomes.

1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

2. Increased investment in school infrastructure (e.g., better classrooms, technology) will lead to improved student performance.

1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

3. Smaller class sizes would enhance student learning and academic achievement.

1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

4. Increased collaboration between teachers, parents, and students will improve academic outcomes.

1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

5. Additional tutoring or after-school programs would help students achieve higher academic performance.

1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

APPENDIX-2: Focus Group Discussion

Dear Respondent,

As a master's student at Addis Ababa University, my name is Melaku Tegegn. In order to partially fulfill the requirements for the award of a master's degree in educational planning and management, I am conducting research on "High school teachers' perception on factors influencing students' academic achievement in Addis Ababa". In light of this, I kindly ask that you take a few moments of your precious time to fill out this questionnaire as completely as possible. Below each section of the questionnaire is a guide. I much appreciate your participation to respond this questionnaire on time. I have not included names on the questionnaire in order to preserve confidentiality. I handle your responses with the appropriate level of privacy. Your provided data only utilized for the intended purpose, nothing more. Additionally, the findings only shown as an aggregate of your responses; no specific result will be linked to a specific respondent.

Yours Sincerely,

Melaku Tegegn

For more information, please contact me on:

Email- melakutegegn28@gmail.com

Section 1: Academic Achievement of High School Students in Addis Ababa

1. How would you describe the overall academic performance of high school students in your department over the past year?
2. What trends have you noticed in student performance (e.g., improvement or decline)?

Section 2: Factors Influencing Student Performance

3. What do you believe are the most significant factors affecting student academic achievement in your subject?
4. How do external factors such as family background or socioeconomic status impact student performance?
5. How do student motivation and behavior influence their academic outcomes?

Section 3: School Resources, Infrastructure and Leadership

6. How adequate are the resources (e.g., textbooks, technology) available to you for teaching your subject?
7. Do you believe the school's infrastructure and facilities support effective learning?
8. How would you assess the role of school leadership (e.g., principal, department heads) in supporting student success?

Section 4: Strategies for Improving Academic Outcomes

9. What strategies would you recommend to improve academic performance in your subject area?
10. How can the school better support students who are struggling academically?
11. What role do you think additional professional development for teachers could play in improving student outcomes?
12. What changes or interventions should the school make to improve overall academic achievement?

APPENDIX-3: Key Informant Interview

Dear Respondent,

As a master's student at Addis Ababa University, my name is Melaku Tegegn. In order to partially fulfill the requirements for the award of a master's degree in educational planning and management, I am conducting research on "High school teachers' perception on factors influencing students' academic achievement in Addis Ababa". In light of this, I kindly ask that you take a few moments of your precious time to fill out this questionnaire as completely as possible. Below each section of the questionnaire is a guide. I much appreciate your participation to respond this questionnaire on time. I have not included names on the questionnaire in order to preserve confidentiality. I handle your responses with the appropriate level of privacy. You're provided data only utilized for the intended purpose, nothing more. Additionally, the findings only be shown as an aggregate of your responses; no specific result will be linked to a specific respondent.

Yours Sincerely,

Melaku Tegegn

For more information, please contact me on:

Email- melakutegegn28@gmail.com

1. Opening Questions

1. Can you describe your role and experience as a director in this school?
2. How do you assess academic achievement in your school?

Section 1: Academic Achievement of High School Students in Addis Ababa

3. What are the general trends in academic performance you've observed among high school students?
4. Are there specific subjects or areas where students perform better or worse?

Section 2: Factors Influencing Student Performance

5. What do you think are the key factors affecting student performance in your school?
6. How do teachers perceive challenges like student socio-economic status and mental health in influencing academic success?

Section 3: School Resources, Infrastructure and Leadership

7. How would you evaluate the current infrastructure (classrooms, technology, learning materials) in your school?
8. Do you think your school has sufficient resources for effective teaching and learning? What's needed most?
9. How do you perceive the impact of leadership strategies on academic success in your school?

Section 4: Strategies for Improving Academic Outcomes

10. What strategies or programs would you recommend to improve student performance based on teacher feedback?
11. How do you prioritize professional development opportunities for teachers to enhance academic outcomes?
12. What are your main goals for improving academic performance in your school over the next year?

Appendix-4: Reliability Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Students in this school generally perform well academically	69.10	57.000	.019	.837
The academic performance of students in this school has improved in recent years	69.02	50.646	.493	.813
Students at this school achieve their academic goals consistently	68.95	52.351	.481	.815
The overall academic achievement of students in this school is comparable to other schools in Addis Ababa	69.00	50.424	.452	.816
Student motivation plays a significant role in their academic performance	68.58	50.408	.571	.809
Parental involvement positively impacts student performance	69.02	50.646	.493	.813
Teacher-student relationships are crucial for academic success	68.76	51.437	.483	.814
Classroom environment (e.g., seating arrangements, noise levels) influences student performance	69.10	57.000	.019	.837
Student access to extra-curricular activities (e.g., clubs, sports) contributes to better academic performance	68.65	52.674	.357	.821
The school has adequate teaching materials (e.g., books, computers, and technology)	68.74	51.770	.480	.814
The physical infrastructure of the school (e.g., classrooms, sanitation, lighting) is sufficient for student learning	69.00	50.808	.506	.813
The leadership of the school supports teachers and students in achieving academic success	68.86	53.334	.389	.819
The school's management effectively implements policies to improve student academic performance	69.65	57.341	.111	.828
There are sufficient learning resources, such as libraries, science labs, and sports	68.75	51.583	.513	.813

facilities, to support student academic success				
Regular professional development for teachers will improve student academic outcomes	68.61	51.634	.472	.815
Increased investment in school infrastructure (e.g., better classrooms, technology) will lead to improved student performance	68.82	51.038	.506	.813
Smaller class sizes would enhance student learning and academic achievement	68.65	52.674	.357	.821
Increased collaboration between teachers, parents, and students will improve academic outcomes	68.61	52.725	.383	.819
Additional tutoring or after-school programs would help students achieve higher academic performance	68.73	50.502	.542	.811