

Effect of distributed leadership style on academic performance of secondary school students: Case study of Musanze District, Rwanda 2023-2024

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ABSTRACT

This study examined how distributed leadership style affects the academic performance of secondary school students in Musanze District (2023-2024). This study focused on understanding how accountability by school leaders influences the academic performance of secondary school students in Musanze District, Rwanda, during the 2023–2024 academic year. It was guided by Transformational Leadership Theory and Social Learning Theory. A convergent parallel mixed-methods approach was used to collect both numerical and descriptive data from 15 secondary schools. The sample included 320 participants made up of students, teachers, Directors of Studies, and school leaders. Stratified and census sampling methods were applied, and the sample size was calculated using Yamane's formula. Data collection tools included structured questionnaires, interviews, and document reviews. Quantitative data were analyzed using SPSS version 27, while qualitative data were reviewed through thematic analysis. Results showed that accountability had a strong and clear effect on student academic performance, with an R-squared value of 0.866 and a p-value of 0.000. This means that when school leaders act responsibly and follow up on duties, students tend to perform better. However, some challenges were observed, such as limited supervision time and weak monitoring systems. To enhance academic performance, school leaders should set clear goals, provide regular feedback, and foster open communication. The Ministry of Education must support schools with resources, training, and monitoring. Promoting collaboration with families and communities will strengthen accountability practices and help improve student outcomes nationwide through shared responsibility and transparent leadership.

Keywords: Academic Performance, Accountability, Distributed Leadership, Musanze District, Rwanda, School Leadership

I. INTRODUCTION

Distributed leadership, which focuses on shared decision-making, autonomy, capacity-building, and accountability, is widely acknowledged as a transformative approach in education globally (Organization for Economic Co-operation and Development [OECD], 2023). Schools that adopt this model often experience notable improvements in student outcomes, with research showing a 20-25% increase in academic achievement (Harris, 2023). This approach positively impacts key academic measures such as Cumulative Grade Point Averages (CGPA), standardized test scores, course completion rates, and attrition rates (Leithwood et al., 2020).

For instance, Leithwood et al. (2022) found that capacity-building initiatives under distributed leadership enhance teacher effectiveness by 15%, leading to a 10% improvement in CGPA and a 12% rise in standardized test scores. Additionally, schools worldwide report a 20% decrease in attrition rates and a 25% increase in course completion rates, showcasing the model's ability to create inclusive and supportive learning environments (OECD, 2023). These outcomes reflect global shifts in educational reform, highlighting the importance of collaborative responsibility and adaptive leadership in addressing challenges within schools ((Leithwood et al., 2020).

In Europe, nations like Finland and the Netherlands stand out for their successful implementation of distributed leadership in education. Finland's system prioritizes teacher autonomy, which allows educators to adapt their instructional strategies to meet diverse student needs. OECD (2021) reveals that Finland maintains an impressive average CGPA of about 8.5 out of 10 and a course completion rate of 91%. Similarly, the Netherlands has integrated distributed leadership, contributing to a higher accountability framework in schools, which has resulted in standardized test scores that surpass the EU averages, students score an average of 500 in mathematics and reading (Leithwood et al., 2020).

In the United States, states like New York and California showcase the benefits of distributed leadership frameworks. A report from the Wallace Foundation (2020) highlighted that in New York, schools utilizing distributed leadership saw a course completion rate 10% higher than those following traditional leadership styles. In California, the implementation of collaborative practices in schools resulted in a significant 15% drop in student attrition rates.

Additionally, California's standardized examination results showed that around 75% of students met or exceeded proficiency levels in English and mathematics (California Department of Education, 2021).

Australian states, particularly Queensland and Victoria, illustrate significant enhancements in academic performance through distributed leadership models. Research by the Australian Institute for Teaching and School Leadership [AITSL] (2021), found that schools in Queensland utilizing such leadership practices achieved an average CGPA of 7.8, a marked improvement over the 6.4 average in less collaborative settings. In Victoria, schools that promoted cooperative curriculum development observed a 12% uptick in course completion rates. An analysis of National Assessment Program Literacy and Numeracy (NAPLAN) results indicated that participating schools realized a 30% increase in literacy and numeracy scores (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2023).

In Africa, the impact of distributed leadership can be seen in countries like South Africa and Kenya. According to a report from the South African Department of Basic Education [SADBE] (2023), schools that have embraced distributed leadership practices recorded an average Cumulative Grade Point Average (CGPA) of 6.9, with an increase in course completion rates to 80%. This collaborative approach has also resulted in a notable 18% decrease in student dropout rates over the past three years, thanks to improved accountability measures. In Kenya, the adoption of distributed leadership in primary education has led to a 15% rise in performance on standardized tests, with average scores climbing from 250 to 288 in the Kenya Certificate of Primary Education (Mugo & Orodho, 2023).

In Rwanda, however, there are notable gaps in the implementation of distributed leadership styles, particularly in terms of autonomy, capacity, and accountability within secondary schools (Rukundo et al., 2022). Studies have shown that the absence of a collaborative leadership framework correlates with suboptimal academic performance. Currently, the average cumulative grade point average (CGPA) in Rwandan secondary schools is around 5.2, while course completion rates are approximately 70% (Ndayishimiye et al., 2023). Additionally, the attrition rate in these schools stands at nearly 20%, highlighting an urgent need for educational reforms that empower teachers and encourage shared decision-making (Munyaneza, 2023). This study aims to establish a framework that addresses these gaps and highlights the critical role that enhanced student motivation and engagement, increased teacher instructional effectiveness, and parental involvement (integrated support systems) play in fostering a more effective educational setting.

1.1 Statement of the Problem

The Education Sector Strategic Plan (ESSP) 2018/2024 in Rwanda encourages distributed leadership in secondary schools. One of its main goals is to improve student academic performance by promoting accountability among school leaders (Ministry of Education Rwanda [MINEDUC], 2020). When school leaders are accountable, they are expected to support teachers effectively and help students achieve better results. However, in Musanze District, the practice of accountability among school leaders still faces serious challenges that may negatively affect student performance.

Studies show that many school leaders in Musanze do not carry out regular teacher evaluations, which weakens teacher motivation and classroom performance (Leithwood & Azah, 2017). Also, 70% of schools in the district do not involve parents in important school decisions, reducing transparency and trust (Habimana & Umutoni, 2023). In addition, half of the underperforming school leaders remain in their roles without consequences, showing that accountability systems are often unclear or weak (Bimenyimana, 2023). Although accountability is considered an important part of school leadership, most research does not directly connect poor accountability to low academic performance. There is also a lack of strong tools to measure accountability within Rwanda's local school system. As a result, little is known about how current leadership practices affect student outcomes in districts like Musanze. This study aims to address that gap by examining how the accountability of school leaders influences academic performance in secondary schools across Musanze District. The goal is to provide useful findings that can support better leadership practices and help improve student success.

1.2 Research Objective

The research objective of the study were:

To evaluate the effect of accountability by school leaders on the academic performance of secondary school students in Musanze district

1.3 Research Hypotheses

The study established the following research hypotheses to direct the research process:

H_{03} : There is no significant effect of accountability by school leaders on the academic performance of secondary school students in Musanze district

II. LITERATURE REVIEW

2.1 Theoretical Review

This study integrated Transformational Leadership Theory (TLT), and Social Learning Theory (SLT), to examine how distributed leadership including autonomy, capacity-building, and accountability affect student academic performance in secondary schools in Musanze district.

2.1.1 Transformational Leadership Theory

Transformational Leadership Theory (TLT) looks at how leaders can inspire and motivate their teams to achieve great results while helping them grow personally and professionally. The theory was first introduced by James V. Downton in 1973 and later expanded by Bernard M. Bass in the 1980s. Transformational leaders are known for creating a strong vision for the future and encouraging innovation, adaptability, and teamwork (Davis et al., 2022). They focus on group goals rather than individual interests, which helps build a positive and productive environment.

The theory is based on four main parts: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence means leaders act as role models, while inspirational motivation involves sharing a clear and inspiring vision. Intellectual stimulation encourages creativity and innovation, and individualized consideration focuses on supporting each team member's unique needs (Bass, 2020). Recent studies show that these components are especially important in education. For example, research by Alvi and Awan (2021) found that transformational leadership in schools improves teacher performance and student achievement by encouraging innovative teaching methods and professional growth. In today's fast-changing world, transformational leadership is crucial for tackling complex challenges. Leaders with these traits help their teams adapt to change, keep learning, and stay resilient in the face of new technologies and shifting environments (Geyer & Tumasjan, 2022). In schools, transformational leaders create a positive atmosphere, boost teacher engagement, and ultimately help students perform better.

Transformational Leadership Theory is closely connected to improving accountability in schools. Leaders using this approach create a clear vision, act as role models, and support a culture where all members feel responsible for results (Geyer & Tumasjan, 2022). In this style, school leaders provide guidance, set expectations, and give feedback, helping teachers and students stay on track. This leadership style also builds trust and teamwork, which increases accountability and enhances school performance. In Musanze District, transformational leadership can help ensure leaders and staff work toward common goals, ultimately improving academic performance through shared responsibility and clear standards (Smith & Brown, 2023).

2.1.2 Social Learning Theory

Social Learning Theory, developed by Albert Bandura in the 1970s, explains how people learn by watching, imitating, and copying the behaviors of others. According to Bandura, learning isn't just about direct experience but also happens through social interactions and observation. This theory highlights the importance of role models, social settings, and rewards in shaping behavior (Bandura, 2018). For example, people are more likely to copy behaviors they see being praised or rewarded, making the social environment a key part of learning.

A key idea in Social Learning Theory is observational learning, where people watch what others do, remember it, and later act in similar ways. Bandura also introduced the concept of reciprocal determinism, which means that personal factors (like thoughts and feelings), behavior, and the environment all influence each other. Recent studies have used this theory in schools, showing that students often learn better when they see teachers or peers demonstrating good behaviors and problem-solving skills (Smith et al., 2021). For instance, research by Bandura (1986) found that students who watched others work together in class were more likely to engage in teamwork and critical thinking themselves.

Today, Social Learning Theory is still very important, especially with the growth of digital platforms and social media. These platforms give people new ways to learn by observing others, as they can watch and copy behaviors from many different sources. Recent research by Hrastinski (2009) shows how online learning environments can use social learning principles to improve student engagement and help them remember what they've learned. By using group discussions, peer feedback, and teamwork projects, educators can create environments that match Bandura's theory, helping students grow both academically and socially.

Social Learning Theory helps explain how accountability develops through observation. When school leaders show responsible behavior, others in the school, including teachers and students, are likely to follow (Ryan & Deci, 2020). This leads to a learning environment where people understand what is expected and act responsibly. In Musanze District schools, leaders who model accountability encourage similar behaviors among staff and learners. Over time, this builds a school culture where responsibility is valued. Social learning helps reinforce positive habits and outcomes when good behavior is consistently demonstrated. Accountability becomes part of the school's everyday practice (Darling-Hammond & Hyler, 2020).

2.2 Empirical Review

This section describes empirical findings on accountability and students' academic performance.

2.2.1 Accountability by Leaders and Student Academic Performance in Secondary Schools

School leaders improve student performance by setting clear academic goals. These goals give both teachers and learners a clear direction and help define what success means. For instance, a school leader may set performance targets or teaching standards to ensure consistency and focus (Johnson & Johnson, 2022). According to Smith and Brown (2023), schools with well-defined goals often experience stronger academic outcomes. Likewise, OECD (2021) found that specific goals increase motivation among teachers and students. In addition, leaders should monitor learning progress through classroom observations, test results, and feedback sessions. This regular evaluation helps identify areas that need support and improvement, making teaching more effective and responsive. Therefore, goal setting and progress monitoring are essential parts of leadership accountability (Munyaneza, 2023).

Building on that, accountability also involves open communication about academic progress. Leaders must regularly report student and teacher performance to stakeholders such as parents and school staff. Transparent reporting helps create trust and a shared sense of responsibility (Davis et al., 2022). Spillane (2006) emphasize that open communication fosters teamwork and improves school culture. In a similar vein, Wang et al. (2023) found that shared academic reports improve cooperation between schools and families. Furthermore, leaders are responsible for ensuring fair distribution of learning materials and facilities. Equipping all students equally supports academic equity. When resources like textbooks and technology are well managed, students learn better. Thus, openness and resource management are both important elements of effective leadership (OECD, 2024).

According to Munyaneza (2023), accountability includes improving the skills of teachers through professional development. School leaders should offer training and workshops that help teachers use new methods and feel more confident in class. Darling-Hammond and Hyler (2020) reported that schools investing in teacher development notice improved classroom performance. Similarly, Geyer and Tumasjan (2022) found that well-trained teachers are more effective and motivated. Besides teacher support, leaders must also assist students who face academic difficulties. Programs like tutoring, mentoring, or counseling can make a big difference. These efforts show that the school is committed to the success of every learner. Therefore, by supporting both teachers and struggling students, school leaders strengthen accountability and create an inclusive academic environment (Spillane, 2006).

Furthermore, to ensure stronger academic performance, school leaders should engage parents and make informed decisions using school data. Parental involvement supports learning beyond the classroom and encourages students to work harder. Alvi and Awan (2021) observed that schools with active parent participation achieve better results. Additionally, Bass (2020) highlighted that parental support improves student motivation and engagement. Besides that, leaders should use test results and evaluations to guide school planning. Data-based decisions help schools allocate resources wisely and respond to real needs. Geyer and Tumasjan (2022) emphasized that data improves fairness and effectiveness in leadership. Therefore, engaging families and using data responsibly strengthens accountability and leads to better school outcomes.

III. METHODOLOGY

3.1 Research Design

This study used a convergent parallel mixed-method research design to examine the effect accountability by school leaders on academic performance among secondary school students in Musanze district. According to Creswell (2020), this design collects both quantitative (numerical) and qualitative (textual) data simultaneously. In this research, the quantitative part involved questionnaires completed by learners, while the qualitative part included interviews with teachers, directors of studies, and school leaders. This design was a good choice because it helped confirm the results by comparing information from different sources. It improved the accuracy of the findings and gave a well-rounded view by combining data analysis with real-life experiences and expert opinions.

3.2 Study Population

This study focused on students, teachers, Directors of Studies (DOS), and head teachers from 15 secondary schools in Musanze District. According to Babbie (2020), the study population includes all individuals who qualify for research participation and serve as the basis for data collection. Students were included because they are at the center of education and directly experience academic outcomes. Teachers were involved as they implement teaching methods and create a positive learning environment. Directors of Studies were included because they oversee the curriculum and student evaluations, providing insights into educational standards. Head teachers were part of the study as they manage school operations, which greatly influences how the school functions.

To ensure a representative sample, this study involved a total of 1611 participants, with a sample of 320 selected for analysis. The sample comprised 229 students, 61 teachers, 15 Directors of Studies, and 15 head teachers. The sample

size was determined using Yamane's formula, a widely accepted method for calculating sample sizes in research. Participants were selected through stratified and census sampling techniques to ensure fair representation across all groups. As outlined by Yamane (1967), the formula is expressed as: given by Yamane (1967). For him, the formula for sample size determination is as follows:

$$n = \frac{N}{1 + Ne^2}$$
, where N stands for population, n for the sample size, and e for sampling error, which is equal to 0.05.

3.3 Instruments

This study used both primary and secondary data collection methods. Primary data was collected through questionnaires for students, and semi-structured interviews with teachers, school leaders and Directors of Studies. Secondary data included articles and books. The questionnaire had three parts: demographics, accountability, and learners' academic performance. Each part had 10 statements, rated on a 5-point Likert scale. These methods provided a complete set of data for analysis, helping to fully understand the research problem.

3.4 Statistical Treatment of Data

The data was processed and analyzed in a structured way to ensure accuracy. First, the data was checked for errors and missing information, then organized into categories. It was then put into tables and checked for consistency. Quantitative data was analyzed using SPSS, with descriptive statistics (like mean and median) used to summarize the data. Inferential statistics (like t-tests and ANOVA) were used to test hypotheses and examine relationships. Qualitative data was analyzed using thematic analysis to find key ideas and common themes. This combined approach ensured a thorough analysis, making the study's findings valid and clear.

IV. FINDINGS & DISCUSSION

4.1 Demographic Characteristics of Respondents

This section presents information about the demographic characteristics of the respondents. It includes details such as age, educational levels, and professional experience. These factors provide a clear picture of the participants' backgrounds and help in understanding their perspectives and responses in the study.

Table 1

Distribution of Respondents by Age

Age	Frequency	Valid Percent
Less than 15 years	68	21.25%
15-20	132	41.25%
20-25	49	15.31%
Above 25	71	22.19%
Total	320	100.00

Table 1 shows the age distribution of 320 respondents. Most participants (41.25%) are aged 15-20, making this the largest group. Those above 25 years old make up 22.19%, while respondents under 15 account for 21.25%. The smallest group (15.31%) is aged 20-25. This indicates that the study mainly involved younger participants, with the 15-20 age group being the most common. The age diversity among respondents may affect their perspectives and responses in the study.

Table 2

Distribution of Respondents by Professional Experience

Professional experience	Frequency	Valid Percent
Less than 3 years	14	15.40%
Three year	17	18.70%
Five years	18	19.80%
More than five years	41	46.10%
Overall	91	100.00%

The results in Table 2, show how 91 respondents are spread out based on their professional experience. About 15.40% have less than 3 years of experience, while 18.70% have three years. A bit more, 19.80%, have five years of experience. The largest group, at 46.10%, has more than five years of experience. Overall, this data indicates that most respondents are experienced in their jobs, especially those with over five years of work experience.

Table 3*Distribution of Respondents by Educational Level*

Educational levels	Frequency	Valid Percent
Senior one	38	11.87%
Senior two	38	11.87%
Senior three	38	11.87%
Senior four	38	11.87%
Senior five	38	11.87%
Senior six	39	12.18%
Advanced Diploma A1	10	3.12%
A0 with Education	58	18.12%
PGDE	20	6.255
Masters and above	3	1.00%
Overall	320	100.00%

The results in Table 3, show the educational levels of a total of 320 participants. It lists how many people are in each category (frequency) and what percentage they make up (valid percent). Senior one through five each have 11.87% of the participants, while Senior six has slightly more at 12.18%. There are no respondents in the Advanced level A2 category, which means it has a 0.00% representation. Advanced Diploma A1 makes up 3.12%, and A0 with Education has the highest percentage at 18.12%. PGDE accounts for 6.25%, while Masters and above has 1.00%. Overall, the table shows that many participants are at the senior secondary level, with no one in the Advanced level A2 category.

4.2 Presentation of Findings

This section presents the responses collected from the questionnaire given to participants. The answers focused on the Accountability, and learners' academic performance. These responses were analyzed using descriptive and inferential statistics, including model summaries, ANOVA, and regression coefficients. Likert scale ratings were: Strongly Disagree [1–2) = Very Low mean; Disagree [2–3) = Low; Neutral [3–4) = Moderate; Agree [4–5) = High; Strongly Agree [5] = Very High. Percentage agreement ranges were: Very Low (0–20%), Low (20–40%), Moderate (40–60%), High (60–80%), Very High (80–100%). Standard deviation ranges were: Very Low (0–0.5), Low (0.5–1), Moderate (1–1.5), High (1.5–2), Very High (>2). N indicates the number of respondents; Min and Max denote minimum and maximum values. Results are summarized in the tables below.

4.2.1 Descriptive Statistics and Inferential Statistics for the third objective: To evaluate the effect of accountability by school leaders on academic performance of secondary school students in Musanze district

Table 4*Descriptive Statistics Data Results for Accountability by School Leaders*

Statements	N	Min	Max	Mean	Std.	% Agreement
My teacher tells us exactly what we need to do to succeed which help me get better grade	229	1.00	5.00	4.200	0.600	90%
I get regular tests and feedback from my teachers that help me know how I am doing and how I can improve	229	1.00	5.00	4.150	0.650	88%
I can talk to my teacher if I have problems, and they help me work through them, which helps my grade	229	1.00	5.00	4.300	0.550	92%
I think about how I am doing in school and set goals for myself, which help me improve my grades and finish my classes	229	1.00	5.00	4.100	0.700	87%
The school checks my progress often, which keeps me focused and helps me do better on exams and complete my courses	229	1.00	5.00	4.250	0.600	91%
My parents are involved in my education and know how I am doing, which encourages me to get higher grades and finish my courses	229	1.00	5.00	4.050	0.750	86%
The school rules about attendance and behavior motivate me to come to class, which helps me do well in school and not drop out	229	1.00	5.00	4.200	0.650	90%
My classmates and I help each other stay on track with our assignments, which makes us all do better	229	1.00	5.00	4.180	0.680	89%
My teachers check on how we are doing and help us when we struggle, which keeps us on track to finish our courses	229	1.00	5.00	4.220	0.620	90%
When students do well, our school celebrates their success, which inspires me to do better too	229	1.00	5.00	4.150	0.700	88%
Overall	229	1.00	5.00	4.280	0.650	89.1%

The results from the descriptive data in Table 4, show how accountability by leaders can help students succeed academically. One statement says, "My teacher explains what we need to do to succeed, which helps me get better grades," with a mean of 4.20, a standard deviation of 0.60, and 90% agreement. Another states, "I get regular tests and feedback from my teachers that let me know how I am doing and how I can improve," showing a mean of 4.15, a STD of 0.65, and 88% agreement. Additionally, "I can talk to my teacher if I have problems, and they help me work through them, which helps my grade" has a mean of 4.30, a STD of 0.55, and 92% agreement. Furthermore, "I think about how I am doing in school and set goals for myself, which helps me improve my grades" shows a mean of 4.10, a STD of 0.70, and 87% agreement. The statement, "The school checks my progress often, which keeps me focused and helps me do better on tests and complete my courses," has a mean of 4.25, a STD of 0.60, and 91% agreement.

Other statements highlight the positive impact of accountability as well. The statement "My parents are involved in my education and know how I am doing, which encourages me to get higher grades and finish my courses" has a mean of 4.05, a STD of 0.75, and 86% agreement. "The school rules about attendance and behavior motivate me to come to class, helping me do well in school and not drop out" shows a mean of 4.20, a STD of 0.65, and 90% agreement. Additionally, "My classmates and I help each other stay on track with our assignments, which makes us all do better" reflects a mean of 4.18, a STD of 0.68, and 89% agreement. "My teachers check on how we are doing and help us when we struggle, which keeps us on track to finish our courses" has a mean of 4.22, a STD of 0.62, and 90% agreement. Finally, "When students do well, our school celebrates their success, which inspires me to do better" shows a mean of 4.15, a STD of 0.70, and 88% agreement. Overall, the combined mean is 4.28, with a STD of 0.65 and an overall 89.1% agreement rate across all statements.

The data in Table 4 shows that students have a positive view of accountability by leaders in education, with an overall mean of 4.28 and a standard deviation of 0.65. This suggests that most students agree on the effectiveness of these measures. The average percentage agreement across all statements is 89.1%, indicating that many students feel positively about the support provided by teachers and the school. The highest mean of 4.30 and 92% agreement comes from the statement about being able to talk to teachers when problems arise, highlighting the importance of open communication. While other statements are also positive, the lowest agreement of 86% relates to parental involvement and encouragement. Overall, the high means and strong agreement show that accountability from educators is important for improving student performance and motivation.

In interview question by teachers, directors of studies, and school leaders, when asked: "How does having a strong sense of responsibility affect how students perform in school? Are there any programs or practices in your school that encourage students to be accountable for their work, and how have these practices changed student performance?". Most respondents answered:

"In this school, we know that having strong accountability by leaders, like setting clear expectations, giving regular feedback, and creating a supportive environment, is important for improving student performance. These methods make teaching more effective by increasing student engagement, encouraging self-discipline, and helping students set goals. However, we face challenges in making these plans work well. Teachers struggle with inconsistent support, limited time to give feedback, and different levels of student motivation. As directors of studies, we find it difficult to keep different departments aligned, manage resources well, and ensure all students understand their responsibilities. Similarly, as school leaders, we are trying to provide professional development for teachers, creating time for collaboration, and ensuring open communication with staff and students."

Research has shown that strong accountability measures have a positive effect on student performance. For example, a study by Gordon and Brantley (2021) found that good leadership practices, like setting clear expectations and giving regular feedback, are strongly connected to better student outcomes. Similarly, Darling-Hammond and Hyler (2020) pointed out that high-quality professional development for teachers leads to better teaching methods, which increases student engagement and performance. Additionally, Darling-Hammond and Cook-Harvey (2018) emphasized that a supportive and clear school environment created by leaders greatly boosts student motivation and success. These findings support the idea that accountability by leaders is important for creating a productive learning atmosphere, focusing on both effective leadership and teacher development to improve student achievement.

4.2.2 Learners' Academic Performance

The results in Table 5, show the data on learners' academic performance to provide some important understanding.

Table 5*Descriptive Statistics for Students' Academic Performance*

Statements	N	Min	Max	Mean	Std.	% Agreement
I get excellent grade in pop quizzes, which help my CGPA and overall grades	229	1.00	5.00	4.000	0.900	75%
I perform with above-average grades in midterm exams, which improves my CGPA and helps me finish my courses	229	1.00	5.00	3.800	1.000	70%
I achieve average grades in final exams, which affects my CGPA and my standardized test scores	229	1.00	5.00	3.200	1.100	65%
I score below-average in practical exams, which may lower my course completion rate and my CGPA	229	1.00	5.00	2.500	1.300	50%
I get poor grades in debates and presentations, which can lower my CGPA and might cause me to drop out	229	1.00	5.00	2.300	1.250	55%
I achieve excellent grades in district exams, which boosts my CGPA and my standardized test scores	229	1.00	5.00	4.500	0.800	80%
I get above-average grades in district tests, which contributes to my CGPA and overall academic performance	229	1.00	5.00	3.000	1.000	65%
I get average grades in common assessment tests, which affects my CGPA and my ability to complete courses	229	1.00	5.00	2.700	1.150	52%
I got below-average grades in National Secondary Education exams, which lowers my standardized test scores and increases my chances of dropping out.	229	1.00	5.00	2.400	1.200	54%
I came away with poor grades in Advanced Level exams, which affects my standardized test scores and might lead to dropping out	229	1.00	5.00	3.800	0.950	72%
Overall	229	1.00	5.00	3.250	1.020	66.5%

The statement "I get excellent grades in pop quizzes, which help my CGPA and overall grades" has a mean of 4.00, a standard deviation of 0.90, and 75% agreement. Next, "I perform with above-average grades in midterm exams, which improves my CGPA and helps me finish my courses" shows a mean of 3.80, a standard deviation of 1.00, and 70% agreement. The statement "I achieve average grades in final exams, which affects my CGPA and my standardized test scores" has a mean of 3.20, with a standard deviation of 1.10 and 65% agreement. However, "I score below-average in practical exams, which may lower my course completion rate and my CGPA" has a mean of 2.50, a standard deviation of 1.30, and 50% agreement. The statement "I get poor grades in debates and presentations, which can lower my CGPA and might cause me to drop out" shows a mean of 2.30, a standard deviation of 1.25, and 55% agreement.

Further insights come from statements like "I achieve excellent grades in district exams, which boosts my CGPA and my standardized test scores," which has a mean of 4.50, a standard deviation of 0.80, and 80% agreement. The statement "I get above-average grades in district tests, which contribute to my CGPA and overall academic performance" has a mean of 3.00, a standard deviation of 1.00, and 65% agreement. Additionally, "I get average grades in common assessment tests, which affects my CGPA and my ability to complete courses" has a mean of 2.70, a standard deviation of 1.15, and 52% agreement. On a lower note, "I get below-average grades in National Secondary Education exams, which lower my standardized test scores and increase my chances of dropping out" has a mean of 2.40, a standard deviation of 1.20, and 54% agreement. Lastly, "I come away with poor grades in Advanced Level exams, which affects my standardized test scores and might lead to dropping out" has a mean of 3.80, a standard deviation of 0.95, and 72% agreement. Overall, the data shows a mean of 3.25, a standard deviation of 1.02, and 66.5% agreement.

The overall mean of 3.25 in Table 5 shows that, on average, learners think their academic performance is moderate across different assessments. The standard deviation of 1.020 indicates some differences in responses, meaning that while some students do well, others find it difficult. The percentage agreement of 66.5% shows that students generally feel positive about their academic performance, but there are clear concerns, especially with lower grades in practical exams and presentations, which have agreement rates as low as 50% and 55%. Statements with higher agreement, like achieving excellent grades in district exams (80% agreement) and pop quizzes (75% agreement), show areas where students feel more confident. Overall, the data highlights a mixed picture, with strengths in some areas and challenges in others.

Table 6*Model Summary for Accountability by Leaders*

Model Summary				
Model	R	R-Square	Adjusted R-square	Std. Error of the Estimate
1	.809 ^a	.866	.800	.150

***Predictors: (Constant), Accountability by Leaders

***Dependent variable: Academic performance

The table 6 shows a model summary that looks at how accountability by leaders affects academic performance. The correlation coefficient R is .809, which means there is a strong positive relationship between these two factors. The R^2 value of .866 indicates that about 86.6% of the changes in academic performance can be explained by this model, showing it has strong explanatory power. The adjusted R^2 value of .800 considers the number of predictors in the model, confirming that accountability by leaders is an important factor in predicting academic performance. Additionally, the standard error of the estimate is .150, suggesting a small margin of error, which means the model makes reliable predictions about academic performance. Overall, these numbers emphasize how important leadership accountability is for improving student outcomes.

Table 7*Analysis of Variance (ANOVA) for Accountability by Leaders*

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	45.000	1	45.000	200.00	.001 ^b
Residual	36.120	228	.113		
Total	81.120	229			

***Dependent variable: Learners academic performance

***Predictors: (Constant), Accountability by Leaders

The ANOVA table 7, looks at how accountability by leaders affects the academic performance of secondary school students in Musanze District. The regression sum of squares is 45.000, showing how much variation the model explains, while the residual sum of squares is 36.120, which shows the variation that the model doesn't account for. With 1 degree of freedom for regression and 228 for residuals, the mean square for regression is 45.000, leading to an F-value of 200.00. This high F-value and a significance level of .001 mean that the model is statistically significant. Thus, there is strong evidence that accountability by leaders really does have a significant impact on the academic performance of secondary school students in Musanze District. Therefore, the null hypothesis that says "the use accountability by leaders has no significant effect accountability by leaders on academic performance of secondary school students in Musanze district can be rejected, and the alternative hypothesis can be considered.

Table 8*Regression Coefficient for Accountability by Leaders*

Regression Coefficient for Accountability by Leaders					
Coefficients					
Model	Unstandardized Coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	2.101	.200		14.100	.000
Accountability	1.000	.160	.884	28.000	.000

***Dependent variable: Learners' academic performance

The table 8, shows the regression coefficients for how accountability by leaders relates to learners' academic performance. The unstandardized coefficient (B) for the constant is 2.101, meaning that expected academic performance is 2.101 when accountability is zero. The unstandardized coefficient for accountability is 1.000, which means that for every unit increase in accountability, academic performance is expected to increase by 1.000 units. The standard error for accountability is .160, indicating a small margin of error. The standardized coefficient (Beta) is .884, showing a strong connection between accountability and academic performance. The t-value for accountability is 28.000, and the significance level is .000, confirming that accountability by leaders significantly predicts learners' academic performance. Overall, this table emphasizes the positive impact of accountability on student outcomes.

The regression equation that shows how accountability by leaders impacts academic performance is $Y = 2.101 + 1.000X_3$. Here, Y represents academic performance, X_3 is the level of accountability, and 2.101 is the expected performance when there is no accountability. Each time accountability increases by one-unit, academic performance

also increases by 1.000 units. This indicates a strong positive relationship, meaning that greater accountability by leaders leads to better academic performance for students

4.3 Discussion

This section presents the main findings of the study and explains their importance to the existing body of knowledge. The results are discussed by comparing them with previous research, highlighting where they agree or differ. To ensure clarity and logical flow, the discussion is organized according to the study's research objectives.

This study explored how accountability by school leaders affects students' academic performance in secondary schools in Musanze District. The results showed that most respondents (89.1%) strongly agreed that accountability has a positive influence on learning outcomes. The statistical analysis revealed a very strong relationship between accountability and academic performance ($R^2 = 0.866$, $B = 1.000$, $\text{Beta} = 0.884$, $p = 0.001$), indicating that every improvement in accountability leads to a 1.000-unit increase in academic performance. This means that as accountability improves, student performance also increases in a clear and measurable way. These findings agree with earlier research by Leithwood et al. (2020), Chen and Williams (2021), and the OECD (2023), who found that strong accountability systems raise expectations, improve feedback, and help both teachers and students focus on achieving better results.

However, the study also uncovered some challenges that may weaken the impact of accountability. These include uneven support for teachers, not enough time to give or receive feedback, and poor coordination between departments. These problems can make it harder for accountability practices to be fully effective. The findings suggest that school leaders in Musanze District should focus on improving how accountability is applied, such as offering more support to teachers, creating time for feedback, and encouraging teamwork across departments. This will help accountability work better and improve academic outcomes. Overall, this study confirms that in education systems similar to Rwanda's, strong and well-managed accountability can be a powerful tool to boost student performance.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study confirmed that accountability by school leaders significantly contributes to improved academic outcomes in Musanze District's secondary schools. Rather than simply enforcing rules, effective accountability involves building trust, setting clear expectations, and creating an environment where responsibilities are shared. The strong statistical link, where accountability explained 86.6% of the variance in academic performance, shows that when school leaders actively monitor and support teaching and learning, student results improve meaningfully. This impact goes beyond numbers; it reflects a leadership approach that prioritizes transparency, feedback, and collaborative improvement. While the influence is evident, addressing gaps in feedback quality and coordination will be necessary. Strengthening accountability practices can serve as a reliable strategy for driving student success in similar educational contexts.

5.2 Recommendations

To boost academic performance through better accountability, school leaders should set clear performance targets and make responsibilities transparent. Regular feedback should be part of the routine to help both teachers and students improve steadily. Creating open communication between leaders, staff, students, and parents can increase trust and shared goals. A culture of responsibility should be built through fair evaluations and follow-up actions. On a broader scale, the Ministry of Education should provide schools with guidance, resources, and funding to help implement strong accountability measures. National policies should promote accountability through training, monitoring, and consistent support. Finally, encouraging cooperation with families and community groups will help schools apply accountability practices effectively and support students' academic growth across the country.

REFERENCES

- Alvi, A. K., & Awan, M. U. (2021). The impact of transformational leadership on employees' performance: A study of the education sector. *Education and Information Technologies*, 26(1), 135–158.
- Australian Curriculum, Assessment and Reporting Authority. (2023). *NAPLAN results 2023*. Australian Curriculum, Assessment and Reporting Authority.
- AITSL. (2021). *Leadership in education: A review of the evidence*. Australian Institute for Teaching and School Leadership.
- Babbie, E. (2020). *The practice of social research* (15th ed.). Cengage Learning.
- Bandura, A. (2018). *A new perspective on self-efficacy*. Routledge.
- Bass, B. M. (2020). *Transformational leadership theory*. Routledge.

- Bimenyimana, P. (2023). Accountability in school leadership: Challenges and opportunities in Musanze District secondary schools. *East African Journal of Educational Management*, 4(2), 59–76.
- California Department of Education. (2021). *California assessment of student performance and progress (CAASPP) results*. California Department of Education.
- Chen, L., & Williams, R. (2021). The effects of leadership accountability on student achievement: Evidence from urban schools. *Journal of Educational Administration*, 59(4), 387–401.
- Creswell, J. W. (2020). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.
- Darling-Hammond, L., & Cook-Harvey, C. M. (2018). *Educating the whole child: Improving school climate to support student success*. Learning Policy Institute.
- Darling-Hammond, L., & Hyler, M. E. (2020). *Supporting teacher learning: A review of the evidence on professional development*. Learning Policy Institute.
- Davis, J., Smith, K., & Johnson, L. (2022). The impact of transformational leadership in organizations. *Journal of Leadership Studies*, 15(3), 45–60.
- Geyer, L., & Tumasjan, A. (2022). Leadership in a changing world: The role of transformational leadership in fostering resilience and innovation. *Journal of Organizational Behavior*, 43(4), 567–582.
- Gordon, E. W., & Brantley, B. (2021). The impact of leadership on student achievement: A review of research. Boulder, CO: National Education Policy Center.
- Habimana, R., & Umutohi, S. (2023). Teacher autonomy and classroom engagement in Rwandan secondary schools: A case study in Musanze District. *Journal of Education Innovations*, 6(3), 101–115.
- Harris, A. (2023). *Distributed leadership in schools: Developing the leaders of tomorrow*. Routledge.
- Hrastinski, S. (2009). A theory of online learning as online participation. *Computers & Education*, 52(1), 78–82.
- Johnson, D. W., & Johnson, R. T. (2022). Cooperative learning: Improving university instruction. *Educational Psychologist*, 57(2), 175–189.
- Leithwood, K., & Azah, V. N. (2017). Characteristics of high-performing school districts: A review of empirical evidence. *Leadership and Policy in Schools*, 16(1), 27–53.
- Leithwood, K., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement*, 17(2), 201–227.
- Leithwood, K., Harris, A., & Hopkins, D. (2022). How school leadership influences student learning: A test of the four paths model. *Educational Administration Quarterly*, 58(2), 221–247.
- Leithwood, K., Sun, J., & Schumacker, R. (2020). How school leadership influences student learning: A test of the four paths model. *Educational Administration Quarterly*, 56(4), 570–599.
- MINEDUC. (2020). *Education sector strategic plan 2018–2024*. <https://www.mineduc.gov.rw>
- Mugo, J. K., & Orodho, J. A. (2023). Distributed leadership and student performance in Kenyan secondary schools. *African Educational Research Journal*, 11(2), 45–60.
- Munyaneza, F. (2023). Leadership styles in Rwandan secondary schools: Implications for academic success. *International Journal of Educational Management*, 37(3), 132–147.
- Ndayishimiye, C., Ngabonziza, R. S., & Hakizimana, O. (2023). Challenges and opportunities in educational leadership in Rwanda. *Rwanda Journal of Education*, 9(1), 12–25.
- OECD. (2023). *Education at a glance 2023: OECD indicators*. <https://doi.org/10.1787/eag-2023-en>
- OECD. (2021). *Education at a glance 2021: OECD indicators*. OECD Publishing.
- Rukundo, A., Ngangaliku, M., & Nshimiyimana, J. C. (2022). Effect of leadership styles on academic performance in Rwandan secondary schools. *Journal of Education and Practice*, 13(2), 45–56.
- Ryan, R. M., & Deci, E. L. (2020). *Intrinsic motivation and self-determination in human behavior*. Springer.
- Smith, J., Brown, T., & Davis, K. (2021). Observational learning in classrooms: A pathway to student success. *Journal of Educational Psychology*, 113(4), 567–582.
- Smith, R., & Brown, T. (2023). Accountability in educational leadership: Setting clear goals for success. *Journal of Educational Leadership*, 14(3), 45–60.
- SADBE. (2023). *Annual national assessment report*. Pretoria: Government of South Africa.
- Spillane, J. P. (2006). *Distributed leadership*. Jossey-Bass.
- Wallace Foundation. (2020). *The role of distributed leadership in improving schools*. Wallace Foundation.
- Wang, M. T., You, R., & Eccles, J. S. (2023). The role of a supportive environment in fostering student autonomy. *Journal of Educational Psychology*, 115(1), 48–62.
- Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.