



Influence of supervision practices on the qualities of learning outcomes in public secondary schools in Kicukiro District.

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ABSTRACT

This study examined the influence of supervision practices on the quality of learning outcomes in public secondary schools in Kicukiro District, Rwanda. Using a correlational research design, data were collected from a sample of 287 teachers, head teachers, and district education officials through questionnaires and interview guides. Quantitative data were analyzed using descriptive statistics, Pearson correlation, and regression analysis in SPSS, while qualitative data underwent thematic analysis. The findings revealed that supervision practices significantly influence learning outcomes, accounting for 41.4% of the variance ($r^2 = 0.414$, $p = .000$). Additionally, a low but positive correlation was observed between supervision practices and quality of learning outcomes ($r = .313$, $p = .035$), underscoring the critical role of effective supervision in enhancing educational quality. The study recommends strengthening school supervision frameworks to promote continuous improvement in teaching and learning, thereby advancing overall educational standards in Kicukiro District.

Keywords: *Supervision Practices; Learning Outcomes; Instructional Leadership; Public Secondary Schools; School Management.*

1 Introduction

Education remains one of the most powerful instruments for societal transformation, shaping individuals' capacities, values, and contributions to economic and social progress. Globally, education systems are entrusted not only with transmitting cognitive skills and essential knowledge but also with fostering cultural values and competencies that enable learners to participate productively in their communities (UNESCO, 2021). This foundational role places education at the heart of global development agendas. In 2015, world leaders adopted the Sustainable Development Goals (SDGs), with SDG 4 explicitly aiming to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” by 2030 (United Nations, 2020). Unlike the earlier Millennium Development Goals, which largely focused on improving access and enrollment, SDG 4 emphasizes educational quality, acknowledging that true progress requires equipping learners with the skills, knowledge, and attitudes needed to navigate an increasingly complex world (UNESCO, 2021).

Quality education is inherently multidimensional. As argued by Alvunger and Wahlström (2020), it goes beyond academic achievement to include learners' emotional, social, and physical development, irrespective of their socio-economic status, gender, or background. Meeting this holistic vision demands more than curriculum delivery—it requires effective school leadership that actively fosters environments conducive to high-quality teaching and learning.

Instructional leadership is increasingly recognized as pivotal in shaping such environments. Defined as the practices school leaders use to support, supervise, and strengthen teaching, instructional leadership encompasses goal setting, supervision, staff development, and building a positive school climate (Hallinger & Wang, 2020). Numerous international studies affirm its significance. In Oman, Al-Mahdy et al. (2021) found that principals' instructional leadership directly improved teacher effectiveness and student achievement. Similarly, Balıkçı (2022) demonstrated in Turkey that collaborative instructional leadership practices enhanced academic outcomes. In Africa, Muriithi et al. (2022) highlighted how Kenyan principals' focus on supervision and clear goals boosted student performance, while Shava and Tlou (2021) showed that strong instructional leadership was essential for learning quality in Zimbabwean schools, especially amid resource constraints.

In Rwanda, improving educational quality is a core element of the national strategy for socio-economic transformation (MINEDUC, 2020). Efforts include initiatives like the School Leadership and Management program, which seeks to build head teachers' competencies in supervision and instructional support (VVOB, 2021). However, studies by Uwitonze et al. (2021) and Tuyishime et al. (2023) reveal that many school leaders still struggle to implement effective supervision practices, with less than 55% consistently applying structured approaches. This gap undermines efforts to translate national policies into tangible improvements in classrooms.

Despite clear global and national evidence on the importance of instructional leadership, there is limited empirical research specifically linking supervision practices to learning outcomes within Rwandan public schools. This creates a knowledge gap that hinders policymakers and educators seeking to design contextually relevant leadership development programs. Given these gaps, this study focuses on examining the influence of supervision practices a key dimension of instructional leadership—on the quality of learning outcomes in public secondary schools in Kicukiro District, Rwanda. By generating empirical evidence on this relationship, the research aims to inform educational policies, guide leadership training initiatives, and ultimately support schools in delivering high-quality education aligned with Rwanda's national development goals and global SDG 4 targets.

. 2.Literature Review

2.1 Empirical Literature

Supervision practices have been globally recognized for their impact on educational quality. Lee and Kwon (2021) in South Korea analyzed the influence of instructional supervision on math performance using a multilevel model across 60 schools. Their findings revealed that supervision frequency significantly boosted student scores ($\beta = 0.33$, $p < .01$), concluding that consistent classroom observations elevate teaching effectiveness. Similarly, in the United States, Taylor and Francis (2020) found through a survey of 290 schools that schools with rigorous supervision frameworks had 9% higher student reading scores. They utilized ANOVA and regression analyses, concluding that monitoring and feedback loops are essential for improving learning outcomes.

In Kenya, Ngugi et al. (2022) investigated how headteacher supervision influences learning outcomes in 65 public secondary schools. Data from 390 teachers analyzed via correlational analysis showed a strong positive relationship ($r = 0.61$, $p < .001$) between supervision intensity and national exam scores. They concluded that systematic supervision drives both teacher accountability and student performance.

In Uganda, Mugisha and Namara (2023) studied instructional supervision in Wakiso District, collecting data from 150 teachers and 10 inspectors, analyzed using ANOVA. Schools with structured weekly supervision meetings recorded 17% higher English proficiency scores. The researchers recommended strengthening supervision protocols as a key strategy for enhancing learning quality.

In Rwanda, Habyarimana and Mukamana (2022) examined instructional supervision in Gasabo District, surveying 80 headteachers. While their results indicated improved punctuality and lesson preparation due to supervision, the study did not quantify the impact on standardized learning outcomes, pointing to an empirical gap. Moreover, Mbayi and Andala (2018), although outside the 2020–2025 window, highlighted that effective supervision enhances teacher performance in Gasabo. However, the direct linkage to learning quality indicators such as exam success remains underexplored. There is a notable absence of research explicitly assessing the influence of instructional supervision on the quality of learning outcomes in Kicukiro District, underscoring the significance of this study

2.2 Theoretical Framework

This study appropriately employs both the open systems theory and the instructional leadership theory, creating a comprehensive framework to examine how supervision practices influence the quality of learning outcomes in public secondary schools in Kicukiro District, Rwanda.

Open Systems Theory, developed by Ludwig von Bertalanffy and later advanced by Scott and Davis (2021), conceptualizes schools as open systems that constantly interact with external environments. They receive inputs (students, policies, resources), process them internally (through teaching, supervision, professional development), and produce outputs (graduates equipped with skills and values). This perspective underscores how schools must adapt to community expectations, societal shifts, and policy demands to remain effective. Recent studies by Mutahi and Kariuki (2023) in Kenya and Uwiringiyimana et al. (2024) in Rwanda demonstrated how viewing schools as open systems illuminates the dynamic feedback loops between schools and their environments, influencing leadership adaptations and, ultimately, learning outcomes.

Instructional Leadership Theory, meanwhile, narrows the focus to leadership practices directly impacting teaching and learning. It highlights goal setting, instructional supervision, and staff development as core levers school leaders use to drive educational quality (Hallinger, 2020; Bush, 2021). Empirical evidence from Lee and Kwon (2021) and Ngugi et al. (2022) links these leadership dimensions to improved student achievement. In Rwanda, Tuyishime et al. (2023) emphasized gaps in these practices, supporting the relevance of this theory. Combining these theories offers a robust analytical lens: open systems theory situates schools within broader societal ecosystems, while instructional leadership theory details the internal practices that transform inputs into high-quality learning outcomes. This dual framework is thus highly suitable for exploring how supervision practices influence learning in Rwanda's evolving education context.

2.3 Conceptual Framework

Conceptual framework was described as a diagrammatic representation with several variations expressing relationship between variables the given research (Mil, 2018).

Independent Variable

Dependent Variable

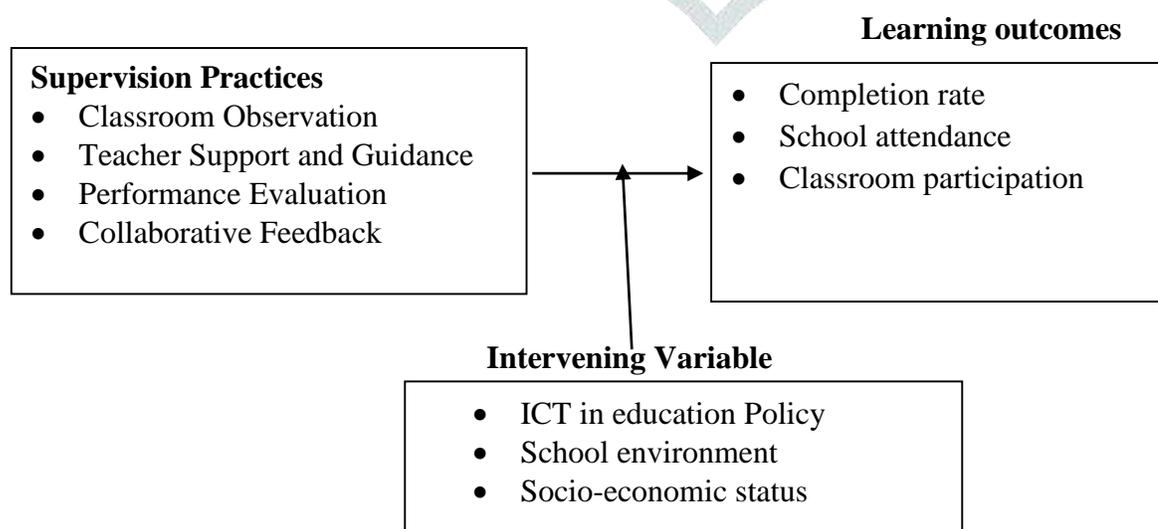


Figure 1 Conceptual Framework

This study illustrates the relationship between instructional leadership practices and learning outcomes in public secondary schools in Kicukiro District. It conceptualizes instructional leadership captured through goal setting skills, supervision practices, and staff professional development as the independent variable. Meanwhile, learning outcomes serve as the dependent variable, measured by indicators such as completion rate, school attendance,

classroom participation, and student discipline. As depicted in Figure 3.1, the framework posits that effective instructional leadership directly shapes these key aspects of learning outcomes. It suggests that strong goal setting, robust supervision, and continuous staff development can positively influence students' discipline, participation, attendance, and progression through school. This conceptual linkage underscores the critical role school leadership plays in fostering environments that support improved student performance and holistic educational success.

3. Research Methodology

3.1 Research Design

A research design is the structured plan that guides how a study is conducted, enabling researchers to systematically collect, measure, and analyze data (Creswell & Creswell, 2023). This study adopted a correlational research design, well-suited to examining the degree and nature of relationships between variables without manipulating them. According to Berman et al. (2021), correlational designs are ideal when investigating how independent variables relate to dependent outcomes. Given that the specific objective of this study was to assess the influence of supervision practices on the qualities of learning outcomes in public secondary schools in Kicukiro District, a correlational design provided the most appropriate framework. It enabled the researcher to quantify how variations in supervision practices relate to learning outcomes such as completion rates, attendance, classroom participation, and discipline. This design choice aligns with recommendations by Toth and Lazarides (2020), who highlighted that correlational studies are valuable for informing educational policies without the complexities of experimental manipulation.

3.2 Target Population and Sample Design

The target population for this study included all individuals directly involved in instructional leadership and influencing student outcomes in public secondary schools in Kicukiro District. Specifically, this consisted of 34 head teachers, 973 teachers, and 3 district education officers, totaling 1,010 participants. This population was selected because supervision practices primarily lie within the scope of head teachers and are implemented through teachers' daily classroom activities, directly affecting learning outcomes. Using Slovin's formula ($n = N / (1 + N(e^2))$), with a 5% margin of error, the sample size was calculated as: $n = 1010 / (1 + 1010*(0.05^2)) = 287$ participants. A fair apportionment strategy ensured proportional representation of each subgroup, resulting in a sample of 10 head teachers, 276 teachers, and 1 district education officer. Sampling techniques included simple random sampling to select head teachers, and stratified plus systematic sampling to select teachers. Each school was treated as a stratum, and within each stratum, systematic sampling selected teachers at regular intervals based on staff lists. For instance, every second teacher in a list of 18 was chosen, ensuring unbiased and evenly distributed representation.

3.3 Data Collection Methods

Data collection focused on supervision practices and their impact on learning outcomes. A structured questionnaire was administered to head teachers and teachers. It was divided into two sections: Section A: Demographic details and Section B: Items specifically addressing supervision practices (e.g., classroom observations, feedback frequency, lesson plan reviews) and perceived effects on student completion, attendance, participation, and discipline. Additionally, a semi-structured interview guide was used with the district education officer to gather qualitative insights on how supervision is supported and monitored at the district level. This provided context to complement quantitative findings. Validity was ensured through expert reviews by educational leadership scholars, who verified that items directly aligned with supervision and learning outcomes. Reliability was tested via a pilot study involving three head teachers from a neighboring district, yielding a Cronbach's Alpha of 0.89, indicating high internal consistency.

3.4 Data Analysis Procedures

Quantitative data were entered and cleaned using SPSS version 21. Descriptive statistics (frequencies, means, standard deviations) summarized respondent profiles and supervision practices. To test the study's specific objective, Pearson correlation coefficients examined the strength and direction of the relationship between supervision practices and learning outcomes indicators. Additionally, a simple linear regression model quantified how supervision predicts variations in learning outcomes, following the formula:

$Y = \beta_0 + \beta_1 X + \epsilon$ Where Y = learning outcomes, X = supervision practices, β_0 = intercept, β_1 = effect size, and ϵ = error term. Interview data underwent thematic analysis, coding responses to identify recurring patterns on how supervision practices influenced school attendance, discipline, participation, and completion. Results were presented in tables and narratives, integrating quantitative and qualitative findings for a holistic interpretation.

3.5 Ethical Considerations

This study rigorously adhered to ethical standards. Formal permissions were secured from Mount Kenya University Rwanda and the Rwanda Education Board. Each participant was informed about the study's objectives, benefits, and risks, with voluntary participation ensured through signed consent forms. Confidentiality was strictly maintained by anonymizing data and storing records securely in password-protected digital files and locked cabinets. No personal identifiers were collected. Participants were assured that they could withdraw at any time without any repercussions. The study maintained academic integrity by properly citing all sources and adhering to plagiarism thresholds below 15%, complying with institutional and global research ethics standards.

4. Presentation of Findings

Results are organized by the study's objectives, covering goal setting, supervision practices, and staff professional development and their influence on learning outcomes. Correlation and regression analyses are also included to establish the relationships among the key variables.

4.1 Influence of Supervision Practices on Qualities of Learning Outcomes

The paper aimed to achieve was to examine the influence of supervision practices on qualities of learning outcomes in public secondary schools in Kicukiro district of Rwanda.

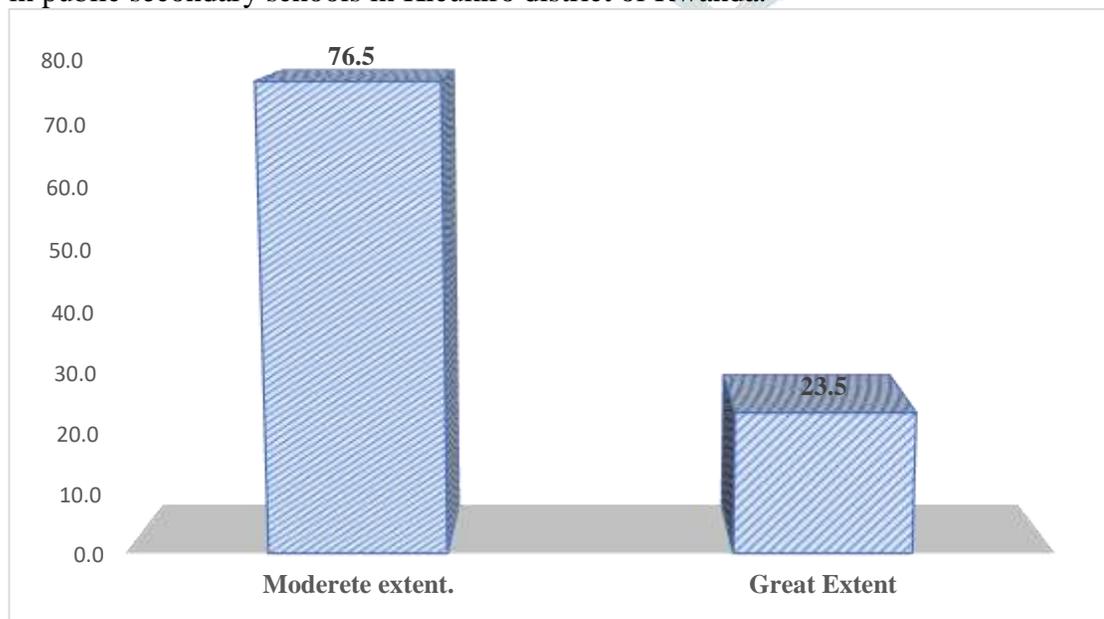


Figure 2 Extent to Which Supervision Practices Influence Learning outcomes

Source: Primary Data (2025)

Figure 2 shows the extent to which supervision practices influence learning outcomes in public secondary schools in Kicukiro district of Rwanda. Throughout the findings it was indicated that supervision practices have moderate influence on learning outcomes. This was indicated by 76.5 percent of the respondents. There was also a need to

understand the perceptions of teachers and head teachers about the role of supervision practices on quality of learning outcomes in public secondary schools in Kicukiro district. The related data was collected and presented in the Table 1.

Table 1 Influence of Instructional Supervision Practices on Qualities of Learning Outcomes of Public Secondary Schools in Kicukiro District (286)

Statements	Disagree		Neutral		Agree		Strongly agree		Mean	Std
	F	%	F	%	F	%	F	%		
Suggesting new approaches and teaching methods after supervision.	0	00	0	00	76	26.6	21	73.4	4.73	.44
Conducting lesson observation on teachers from time to time.	8	2.8	3	11.1	11	41.1	12	44.4	4.26	.79
Checking students' exercise books after supervision has been carried out.	3	11.1	8	28.2	18	63.3	22	79.7	4.52	1.02
Ensuring that teachers prepare and use schemes of work.	3	11.1	0	00	12	44.4	12	44.4	4.20	.94
Giving constructive and useful feedback after the supervision.	0	00	2	8.7	12	44.4	13	46.9	4.38	.65
Over all	6	5.6	13	4.5	92	32.3	167	57.7	4.41	0.76

Source: Primary Data (2025)

Table 1 presents teachers' and head teachers' perceptions on how supervision practices influence learning outcomes in secondary schools within Kicukiro District. Data from 286 respondents were gathered using structured questionnaires. Findings revealed that 73.4% agreed head teachers suggested new teaching methods after supervision, 44.4% strongly affirmed conducting regular lesson observations, and 79.7% confirmed checking students' exercise books post-supervision. Additionally, 46.4% strongly agreed supervision ensured use of schemes of work, while 46.9% acknowledged receiving constructive feedback. Overall, 57.7% strongly agreed and 32.3% agreed that supervision practices positively impact learning outcomes. Interviews supported these results, with respondents noting that head teachers skilled in supervision enhanced teacher performance and created conducive learning environments. These findings align with Kamau and Wanjiru (2021), who found robust supervision improves school performance, and with Njeri and Mwangi (2023), who highlighted that facilitative supervision boosts teacher morale and student achievement. Table 2 further details these relationships.

Table 2 Supervision practice and Qualities of Learning outcomes

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643 ^a	.414	.412	.73719

a. Predictors: (Constant), Extent to which Instructional Supervision Practices influence learning outcomes in public secondary schools in Kicukiro district

Source: Primary Data (2025)

Table 2 shows that there is a strong positive degree of relationship between supervision practices and learning outcomes of public secondary schools in secondary schools. This was indicated by $r = 0.643$, r -square also known as coefficient of determination equal to 0.414, sig 0.000. This tells us that supervision practices can explain 41.4 percent on the variation of learning outcomes in public secondary schools in Kicukiro district of Rwanda.

5. Discussion of Findings

The findings of this study demonstrate that supervision practices by head teachers significantly influence the quality of learning outcomes in public secondary schools in Kicukiro District, Rwanda. As shown in Table 1, a considerable proportion of teachers and head teachers agreed that after supervision, head teachers suggested new teaching methods (73.4%), regularly observed lessons (44.4%), checked students' exercise books (79.7%), ensured preparation and use of schemes of work (44.4%), and provided constructive feedback (46.9%). Collectively, 57.7% of respondents strongly agreed and 32.3% agreed that these supervision practices positively affect learning outcomes. The regression analysis in Table 2 further supports this, revealing a strong positive relationship ($r = 0.643$) and indicating that supervision practices explain 41.4% of the variation in learning outcomes ($R^2 = 0.414$).

These results align well with earlier studies in similar contexts. Kamau and Wanjiru (2021) in Kenya found that effective supervision practices, such as protecting instructional time, conducting frequent classroom observations, and providing targeted feedback, significantly improved student academic performance. Their study emphasized that supervision fosters accountability and enhances teaching standards, creating an environment conducive to better learning outcomes. Likewise, Njeri and Mwangi (2023) argued that moving from traditional, authoritarian supervision approaches to more collaborative and supportive supervision greatly boosts teacher morale and commitment, leading to higher student achievement.

Furthermore, the findings resonate with Muriithi et al. (2022), who observed in Kenyan secondary schools that instructional supervision practices, including consistent classroom visits and follow-up meetings, had a notable impact on reducing dropout rates and improving overall academic performance. In the Rwandan context, these results are consistent with observations by Uwitonze et al. (2021), who noted that although many Rwandan school leaders understood the importance of supervision, effective application was often inconsistent. This study extends that insight by quantitatively demonstrating that when properly implemented, supervision practices account for a substantial portion of improvements in student outcomes.

The qualitative insights from interviews in this study further support existing literature, as district education officers pointed out that head teachers who possessed strong supervision skills were more likely to drive improvements in teacher performance and cultivate learning environments that elevate student outcomes. This aligns with Robinson et al. (2020), who highlighted that leadership actions directly tied to monitoring instruction and offering constructive feedback are key levers in achieving educational quality. This study reinforces the critical role of instructional supervision in enhancing the quality of learning outcomes, corroborating findings from Kenya, Zimbabwe, and previous work in Rwanda. It emphasizes the need for deliberate efforts to strengthen supervision practices among school leaders, ensuring they consistently guide, support, and monitor teachers to achieve sustained improvements in student learning.

6 Conclusion and Recommendations

The paper concluded that supervision practices employed by school leaders moderately influence the quality of learning outcomes. Supervision activities such as lesson observations, checking student work, guiding scheme preparation, and giving constructive feedback were found to maintain teaching quality and improve students' academic work. This fully answers the second research question, demonstrating that while supervision has a positive

impact, its influence is relatively moderate compared to goal setting and professional development, pointing to areas for strengthening supervision frequency and feedback depth. This study contributes evidence from Rwanda that although supervision practices are essential, their effectiveness heavily depends on how developmental (rather than fault-finding) these processes are. This adds to emerging African literature advocating for mentorship-oriented supervision.

Based on the study findings and conclusions, the following recommendations are proposed to strengthen instructional leadership practices and improve the quality of learning outcomes in public secondary schools in Kicukiro District and similar contexts.

Head teachers should adopt mentorship-based approaches to supervision by emphasizing coaching, peer lesson observation, and collaborative problem-solving. This will shift away from purely fault-finding supervision to approaches that motivate teachers and improve classroom practice. Given that only 44.4% reported frequent lesson observations, school leaders should establish clear supervision schedules and ensure feedback is immediate, specific, and actionable to enhance teaching effectiveness. The Rwanda Basic Education Board (REB) should design short courses for head teachers and deputy head teachers focused on modern instructional supervision techniques to address the identified moderate influence of current supervision on learning outcomes. This would help establish whether instructional leadership practices have similar influences on learning outcomes across diverse socio-economic and educational contexts.

This study primarily examined supervision practices, future researchers should explore other dimensions of instructional leadership such as: curriculum management, data-driven decision-making, fostering inclusive learning environments, and how these relate to student performance and holistic development. This study adopted a cross-sectional approach. Future research should employ longitudinal designs to track how improvements in instructional leadership practices influence learning outcomes over time. This would provide deeper causal insights beyond correlations.

References

- Abdullahi, H., Bello, A., & Usman, M. (2022). Ethical considerations in educational research: Ensuring participants' rights and dignity. *International Journal of Social Science Research*, 10(1), 56–70.
- Adam, M. (2020). Sample size determination in quantitative social science research. *Journal of Social Research Methodologies*, 4(2), 45–52.
- Alharbi, A., & Alfaifi, A. (2022). Essentials of designing social research: Principles and applications. *Social Sciences Review*, 11(3), 134–148.
- Al-Mahdy, Y. F. H., Al-Harhi, A. S., & Elyas, T. (2021). The impact of instructional leadership on teacher effectiveness in Oman. *International Journal of Educational Management*, 35(2), 388–400.
- Alvi, M. (2020). A manual for selecting sampling techniques in research. *Munich Personal RePEc Archive (MPRA)*.
- Alvunger, D., & Wahlström, N. (2020). The changing role of teachers in globalized curriculum reforms. *European Educational Research Journal*, 19(4), 318–336.
- Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2021). *Introduction to research in education* (10th ed.). Cengage Learning.
- Balıkcı, A. (2022). The relationship between instructional leadership and student achievement in Turkey. *Educational Studies*, 48(2), 221–235.
- Berman, E. M., Wang, X., & Chen, C. (2021). Research designs in public administration: Balancing rigor and relevance. *Public Administration Review*, 81(5), 799–809.
- Bizimana, J., & Habimana, P. (2022). Protecting confidentiality in education research in Rwanda. *Rwandan Journal of Education Policy*, 7(1), 54–62.
- Bolarinwa, O. A. (2021). Principles and methods of reliability testing in social science research. *International Journal of Social Science Research*, 9(2), 44–59.
- Bush, T. (2021). Instructional leadership and student outcomes: An international perspective. *Educational Management Administration & Leadership*, 49(3), 348–363.
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). Sage Publications.
- Etikan, I. (2021). Population and sample: Sampling techniques. *Biometrics & Biostatistics International Journal*, 5(6), 215–217.
- Gray, D. E. (2022). *Doing research in the real world* (5th ed.). Sage Publications.

- Habyarimana, J., & Mukamana, F. (2022). Instructional supervision and teacher effectiveness in Gasabo District. *Rwandan Journal of Education*, 9(1), 101–114.
- Hallinger, P. (2020). Bringing context out of the shadows of leadership. *Educational Management Administration & Leadership*, 48(1), 20–36.
- Hallinger, P., & Wang, W. C. (2020). Assessing the effects of principal instructional leadership on student achievement: A meta-analysis. *Educational Administration Quarterly*, 56(4), 569–611.
- Kamau, M., & Wanjiru, L. (2021). Influence of instructional supervision on academic performance in Kenyan secondary schools. *African Journal of Education and Practice*, 7(2), 45–59.
- Lee, J., & Kwon, H. (2021). The effects of instructional supervision on student achievement in South Korea. *Asia Pacific Education Review*, 22(3), 463–477.
- MINEDUC. (2020). *Education Sector Strategic Plan 2020/21–2024/25*. Ministry of Education, Rwanda.
- Mugisha, R., & Namara, J. (2023). The impact of instructional supervision on English proficiency in Uganda. *International Journal of Educational Research*, 112, 102059.
- Muriithi, S., Ndethiu, S., & Njoka, J. (2022). Head teachers' instructional leadership and students' academic performance in Kenya. *African Educational Research Journal*, 10(1), 14–23.
- Muriithi, S., Ndethiu, S., & Njoka, J. (2022). Head teachers' instructional leadership and students' academic performance in Kenya. *African Educational Research Journal*, 10(1), 14–23.
- Mutahi, J., & Kariuki, G. (2023). School leadership and community engagement in Kenya: An open systems approach. *International Journal of Leadership in Education*, 26(4), 573–589.
- Ngugi, J., Kamau, N., & Mwangi, P. (2022). Influence of headteacher supervision on academic performance in Kenyan secondary schools. *Journal of Educational Policy and Leadership*, 2(3), 88–103.
- Njeri, P., & Mwangi, R. (2023). Instructional supervision styles and student achievement in Kenyan secondary schools. *Educational Management Review*, 4(1), 23–37.
- Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2020). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly*, 56(4), 528–568.
- Scott, W. R., & Davis, G. F. (2021). *Organizations and organizing: Rational, natural, and open systems perspectives* (2nd ed.). Routledge.
- Shava, G. N., & Tlou, F. N. (2021). Instructional leadership and learning quality in Zimbabwean schools. *African Journal of Teacher Education*, 10(1), 34–51.
- Taylor, J., & Francis, P. (2020). Instructional supervision and student reading performance: Evidence from U.S. schools. *American Educational Research Journal*, 57(4), 1231–1256.
- Toth, K., & Lazarides, R. (2020). Using correlational research in educational policy studies. *Educational Policy Review*, 27(3), 212–227.
- Tuyishime, E., Habimana, A., & Uwitonze, J. (2023). Leadership practices in Rwandan schools: Gaps and opportunities. *Rwandan Journal of Education Policy*, 8(1), 77–92.
- UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO Publishing.
- United Nations. (2020). *Transforming our world: The 2030 agenda for sustainable development*. <https://sdgs.un.org/2030agenda>
- Uwiringiyimana, E., Niyonzima, S., & Hakizimana, E. (2024). School leadership and responsiveness to community expectations in Rwanda. *International Journal of Educational Development*, 98, 102789.
- Uwitonze, J., Habimana, D., & Mugisha, P. (2021). Instructional supervision practices in Rwanda: A study of Gasabo District. *Rwandan Journal of Education*, 8(2), 115–127.
- Uwitonze, J., Habimana, D., & Mugisha, P. (2021). Instructional supervision practices in Rwanda: A study of Gasabo District. *Rwandan Journal of Education*, 8(2), 115–127.
- VVOB. (2021). *Supporting school leadership and management in Rwanda*. VVOB Rwanda Publications.