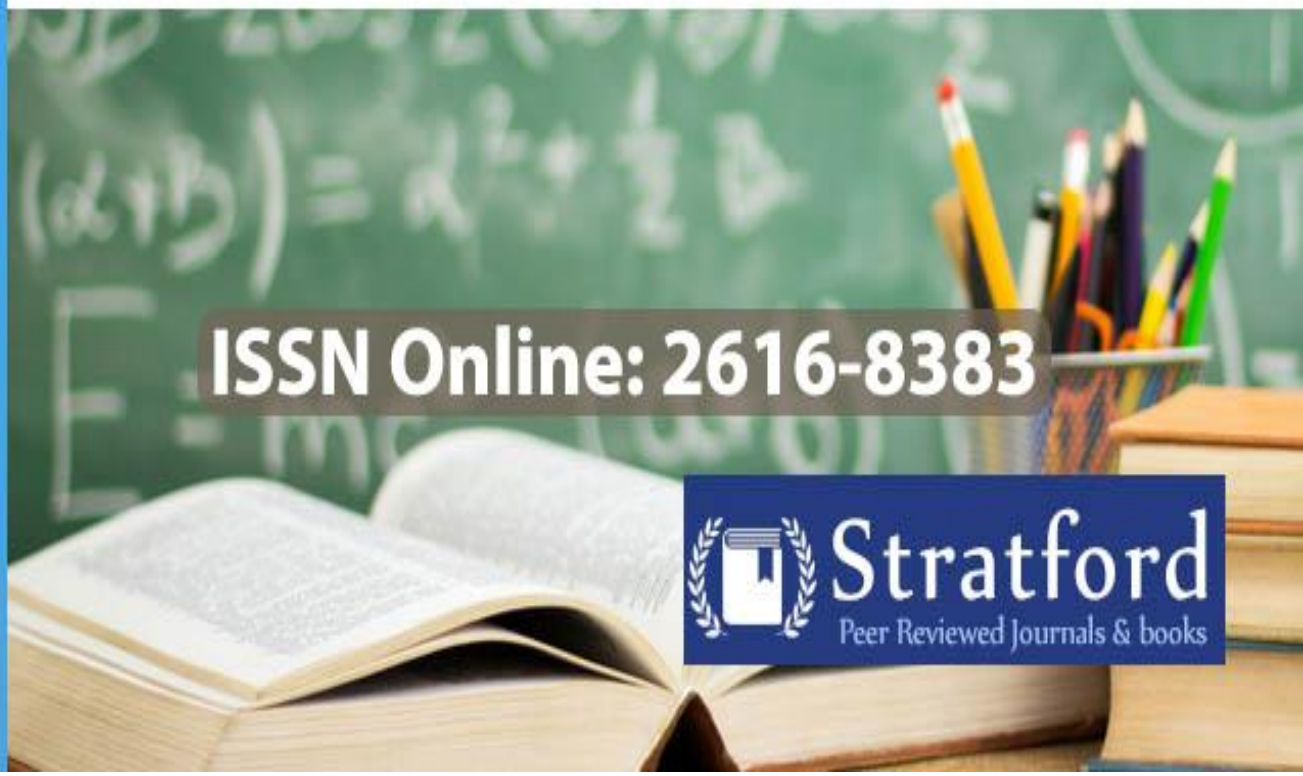
Journal of Education



Monitoring and Evaluation Systems and Performance of Ordinary Level Students in Public Day Schools' in Kicukiro District, Rwanda

Nshizirungu Tite & Malgit Amos Akims

ISSN: 2616 - 8383

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

Monitoring and Evaluation Systems and Performance of Ordinary Level Students in Public Day Schools' in Kicukiro District, Rwanda

[1]Nshizirungu Tite & [2]Malgit Amos Akims

[1.] Mount Kenya University

[2.] School of Business and Economics, Mount Kigali University, Rwanda

2 School of Social Sciences, Mount Kenya University

malgitakims.official@gmail.com

***How to cite this article*: Nshizirungu T. & Akims, M. A. (2026). Monitoring and Evaluation Systems and Performance of Ordinary Level Students in Public Day Schools' in Kicukiro District, Rwanda. *Journal of Education*, 9(1), 83–101.** https://doi.org/10.53819/81018102t2578

Abstract

The primary objective of this study was to examine the effect of Monitoring and Evaluation (M&E) systems on the performance of ordinary level students in public day schools in Kicukiro District, Rwanda. Guided by the Results-Based Management (RBM) Theory and Systems Theory, the research emphasized accountability, feedback loops, and the interdependence of educational processes in achieving improved learning outcomes. A mixed-methods approach was employed, combining quantitative and qualitative methodologies within a descriptive and correlational research design. The target population comprised 769 individuals, including head teachers, directors of studies, teachers, and students, from which a sample size of 315 respondents was selected using purposive and stratified random sampling. Data collection involved structured questionnaires, interviews, and document reviews, with reliability confirmed through Cronbach's Alpha and validity ensured via expert review. Findings revealed that M&E design and planning had a moderate positive influence on student performance ($\beta = 0.287$, $p < .001$), while human capacity, particularly teacher competence, also contributed positively though constrained by heavy workloads ($\beta = 0.152$, $p = .003$). Lesson preparation processes emerged as the strongest predictor of student performance ($\beta = 0.552$, $p < .001$), especially when informed by M&E data and supported with teaching resources. Overall, the regression model explained 72.4% of the variation in student performance ($R^2 = 0.724$), confirming that effective M&E systems significantly enhance academic outcomes. The study provides empirical evidence for policymakers, education administrators, and school leaders on the importance of strengthening M&E systems to improve teaching practices and student achievement in Rwanda.

Keywords: *Lesson preparation, Monitoring and Evaluation systems, M&E design and planning, human capacity, and students' performance*

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

1.1 Background of the Study

Education is widely recognized as a fundamental driver of national development, and effective accountability systems are essential for ensuring quality learning outcomes. Globally, Monitoring and Evaluation (M&E) systems have become central to education management, enabling institutions to track progress, inform decision-making, and strengthen accountability.

In developed regions such as the United States and Europe, M&E practices are institutionalized within school systems. For example, every Student Succeeds Act (ESSA) in the United States mandates continuous monitoring of student achievement through standardized assessments. Similarly, countries like Finland and Germany implement comprehensive national evaluation frameworks that assess instructional quality, student performance, and teacher effectiveness, contributing to consistently high educational standards.

In Asia, nations such as Singapore and South Korea have embraced advanced M&E strategies that incorporate digital monitoring tools and real-time feedback systems. These approaches have significantly contributed to strong student performance in international assessments such as the Programme for International Student Assessment (PISA), positioning these countries as global leaders in education quality.

Across Africa, the role of M&E in strengthening education systems is increasingly acknowledged. However, implementation challenges persist. According to UNESCO (2023), issues such as weak monitoring structures, poor data quality, and limited institutional capacity continue to undermine the effectiveness of education programs. The Continental Education Strategy for Africa (CESA 2015–2026) emphasizes the need for robust M&E systems to enhance accountability and track progress.

In Rwanda, considerable efforts have been made to integrate M&E into the education sector. Tools such as the School Data Management System (SDMS) and the Education Sector Strategic Plan (ESSP 2018–2024) promote the use of reliable data for planning and performance monitoring. The Rwanda Education Board (REB) also conducts national assessments and school inspections to support quality improvement. Despite these initiatives, challenges remain, particularly in ordinary level public day schools, where limited skilled personnel, inconsistent data reporting, and weak follow-up mechanisms hinder effectiveness.

Kicukiro District, located in Kigali City, comprises several public day schools serving students from diverse socio-economic backgrounds. Although policies aim to ensure equitable access to quality education, disparities in student performance persist. Variations in M&E practices particularly in lesson planning, teacher supervision, and feedback mechanisms contribute to these inconsistencies. This study therefore examines the effect of Monitoring and Evaluation systems on the performance of ordinary level students in public day schools in Kicukiro District.

1.2 Problem Statement

Education is central to Rwanda's development agenda, and several reforms have been introduced to improve learning outcomes across all levels of schooling. Among these reforms, monitoring and evaluation (M&E) systems have been emphasized as tools for strengthening accountability, guiding instructional practices, and ensuring that national education goals are met. In principle, effective M&E should enable teachers and administrators to identify weaknesses, inform

pedagogical adjustments, and enhance student learning outcomes (Ministry of Education, 2022; National Institute of Statistics of Rwanda [NISR], 2022).

However, despite these efforts, evidence shows that Ordinary Level students in public day schools in Kicukiro District continue to record inconsistent or below expected results in national examinations. This trend has persisted even though M&E frameworks exist to support decision making and performance tracking at school and district levels. National reports and academic research indicate that systemic challenges including weak utilization of M&E findings, insufficient teacher professional development, and lingering post-COVID-19 learning gaps have contributed to limited gains in student achievement (Uwizeyimana et al., 2022; Dusabe, 2023; Sibomana & Ndayambaje, 2024).

While existing studies in Rwanda and elsewhere have explored education quality, professional development, and post pandemic learning recovery, there remains a limited body of empirical research focusing specifically on how M&E systems influence Ordinary Level student performance in public day schools within Kicukiro District. Without such localized evidence, it becomes difficult for district education officers, school leaders, and policymakers to translate M&E findings into concrete strategies that improve classroom practices and learning outcomes (Dusabe, 2023; Sibomana & Ndayambaje, 2024).

Therefore, the problem this study addresses is the disconnect between the presence of monitoring and evaluation systems in Rwanda's education sector and the persistently low or inconsistent performance of Ordinary Level students in public day schools in Kicukiro District. By investigating how M&E systems are designed, implemented, and utilized at this level, the study seeks to generate practical insights that can strengthen accountability, enhance teaching effectiveness, and ultimately improve student performance in line with Rwanda's education development goals.

1.3 Specific Objectives

i. To determine the effect of monitoring and evaluation(M&E) design and planning on students' performance in public day schools at the ordinary level in Kicukiro District.
ii. To evaluate the effect of human capacity on the students' performance in public day schools at the ordinary level in Kicukiro District
iii. To examine the effect of lesson preparation process on the students' performance in public day schools at the ordinary level in Kicukiro District.

2.0 Empirical Review

2.1 Design and Planning of Monitoring and Evaluation and performance of students.

The reviewed empirical studies from global, regional, and local contexts consistently show that effective Monitoring and Evaluation (M&E) systems play a crucial role in improving student learning outcomes. When monitoring data are systematically collected, analyzed, and used in decision-making, they strengthen educational planning, instructional quality, teacher support, accountability, and resource allocation.

At the global level, studies by UNICEF (2022), the World Bank (2021, 2023), and Crouch (2020) found that learning assessment systems, continuous monitoring, teacher coaching, structured pedagogy, and formative assessment contribute significantly to better educational performance. These studies emphasize that M&E systems are most effective when linked to teacher

development, curriculum improvement, and learning progress tracking. However, many of these studies pay limited attention to contextual and implementation challenges, particularly in developing countries.

At the regional level, a study conducted in Kenya by Gatama, Otieno, and Waweru (2023) demonstrated that regular monitoring of lesson preparation and classroom instruction positively influences students' examination performance. The findings confirmed that school-based M&E practices contribute to improved academic achievement.

At the local level in Rwanda, studies by the Ministry of Education (2024), the Global Partnership for Education (2023), and the National Examination and School Inspection Authority (2021–2024) showed that strong Monitoring, Evaluation, and Learning (MEL) frameworks, improved assessment systems, and effective use of educational data enhance planning, accountability, instructional support, remedial teaching, and student performance. The studies also highlighted the value of performance dashboards and data-driven decision-making in improving learning outcomes.

Overall, the evidence indicates that well-designed and institutionalized M&E systems contribute significantly to educational improvement. The greatest benefits are achieved when monitoring information is actively used to support decision-making, teacher development, and continuous school improvement. Nevertheless, challenges remain regarding implementation capacity, contextual adaptation, and teachers' ability to effectively utilize educational data

2.2 Human Capacity and Performance of Students

The reviewed studies demonstrate that human capacity is a key factor influencing student performance and includes teacher quality, instructional resources, learner psychological well-being, health interventions, and supportive educational policies. Evidence from global, regional, and local contexts shows that strengthening these components can significantly improve learning outcomes.

At the global level, Bagnall et al. (2020) found that teacher quality and access to learning resources such as libraries, computers, and projectors positively influence student achievement. The study concluded that improving educational outcomes requires simultaneous investment in teacher capacity and school infrastructure. Similarly, Li et al. (2024) revealed that psychological capital, particularly self-efficacy, strongly predicts academic success, emphasizing the importance of psychological support programs in schools. Angrist et al. (2023) further demonstrated that health interventions, such as malaria prevention programs, contribute to improved cognitive performance and should be integrated into broader human capital development strategies.

At the regional level, Kazaara and Nelson (2024) examined competency based teacher training in Uganda and found that while training improved instructional practices, its direct impact on student performance was difficult to determine due to weak monitoring systems. The study emphasized the need for continuous evaluation to ensure teacher development programs produce measurable learning outcomes.

At the local level in Rwanda, the UNESCO and Ministry of Education (2021) Human Capital Index report identified challenges including limited access to early childhood education, inadequate teacher professional development, and low learning outcomes. The report concluded that strengthening teacher training, expanding pre-primary education, and improving Monitoring

and Evaluation (M&E) systems are essential for enhancing human capital and educational performance.

Overall, the studies indicate that improving student performance requires a multidimensional approach that combines teacher development, learner psychological support, adequate infrastructure, health interventions, and effective policy implementation. However, most studies provide limited classroom-level evidence and insufficient analysis of how M&E systems influence the relationship between human capacity and student performance. This gap highlights the need for further research, particularly in Rwanda's public day schools.

2.3 Lesson Preparation Process and Students Performance.

The reviewed studies consistently demonstrate that effective lesson preparation is a critical factor in improving student academic performance. Evidence from global, regional, and developing country contexts shows that structured lesson planning enhances student comprehension, curriculum coverage, classroom management, instructional quality, and overall learning outcomes. At the global level, studies by Khan, Siraj, and Ilyas (2024) found that students taught through well-structured lesson plans performed significantly better than those taught without such plans, highlighting the importance of lesson planning in teacher training. Ruiza-Roza et al. (2024) further showed that detailed lesson preparation improves communication, technology integration, and reflective teaching practices, thereby strengthening teacher competence and student learning experiences. Similarly, the ZDM Review (2023) revealed that teachers' motivation, instructional beliefs, and curriculum awareness strongly influence the quality of lesson preparation, emphasizing the need for reflective practice and collaborative planning in teacher education. Kloker, Bukoli, and Kateete (2024) also demonstrated that Artificial Intelligence assisted lesson planning can produce higher quality lesson plans and improve instructional effectiveness, particularly in resource constrained settings.

At the regional level, Ochwada (2023) conducted a study in Kenya and found that students taught by teachers who prepared detailed lesson plans achieved significantly higher academic scores than those in the control group. The study concluded that effective lesson planning enhances syllabus coverage, classroom management, and student achievement.

Although limited local evidence exists, findings from developing country contexts suggest that structured lesson preparation remains highly relevant for education systems similar to Rwanda. Overall, the studies agree that lesson planning whether through structured preparation, reflective practice, or technology supported approaches contributes positively to student academic performance.

However, most studies have focused on short term academic outcomes and have given limited attention to the long term effects of lesson preparation. In addition, there is little evidence on how lesson planning is monitored, evaluated, and improved through Monitoring and Evaluation (M&E) systems. This reveals a research gap regarding the relationship between lesson preparation, M&E practices, and sustained student performance, particularly in low-resource educational settings such as Rwanda.

2.4 Critical review and Research Gap Identification

The reviewed studies consistently demonstrate that effective lesson preparation is a critical factor in improving student academic performance. Evidence from global, regional, and developing-

country contexts shows that structured lesson planning enhances student comprehension, curriculum coverage, classroom management, instructional quality, and overall learning outcomes.

At the global level, studies by Khan, Siraj, and Ilyas (2024) found that students taught through well-structured lesson plans performed significantly better than those taught without such plans, highlighting the importance of lesson planning in teacher training. Ruiza-Roza et al. (2024) further showed that detailed lesson preparation improves communication, technology integration, and reflective teaching practices, thereby strengthening teacher competence and student learning experiences. Similarly, the ZDM Review (2023) revealed that teachers' motivation, instructional beliefs, and curriculum awareness strongly influence the quality of lesson preparation, emphasizing the need for reflective practice and collaborative planning in teacher education. Kloker, Bukoli, and Kateete (2024) also demonstrated that Artificial Intelligence assisted lesson planning can produce higher quality lesson plans and improve instructional effectiveness, particularly in resource constrained settings.

At the regional level, Ochwada (2023) conducted a study in Kenya and found that students taught by teachers who prepared detailed lesson plans achieved significantly higher academic scores than those in the control group. The study concluded that effective lesson planning enhances syllabus coverage, classroom management, and student achievement.

Although limited local evidence exists, findings from developing-country contexts suggest that structured lesson preparation remains highly relevant for education systems similar to Rwanda. Overall, the studies agree that lesson planning whether through structured preparation, reflective practice, or technology supported approaches contributes positively to student academic performance.

However, most studies have focused on short-term academic outcomes and have given limited attention to the long-term effects of lesson preparation. In addition, there is little evidence on how lesson planning is monitored, evaluated, and improved through Monitoring and Evaluation (M&E) systems. This reveals a research gap regarding the relationship between lesson preparation, M&E practices, and sustained student performance, particularly in low-resource educational settings such as Rwanda.

2.5 Theoretical Framework

This study is guided by Systems Theory, Results-Based Management (RBM), Human Capital Theory, and Accountability Theory, which collectively explain how effective Monitoring and Evaluation (M&E) systems, teacher capacity, and institutional responsibility contribute to improved educational outcomes. Systems Theory and RBM view education as an interconnected system in which M&E links planning, implementation, and feedback to support instructional planning, evidence-based decision-making, and improved student performance (Ministry of Education, 2024; UNICEF, 2022; World Bank, 2021). Human Capital Theory emphasizes that investments in teacher professional development enhance instructional quality and the effective use of M&E data, while Accountability Theory highlights the role of monitoring mechanisms in strengthening teacher performance, attendance, and responsibility (Mugirwanake & Mugiraneza, 2024; Sibomana & Ndayambaje, 2024; Zhang et al., 2020). Although challenges such as limited resources and inadequate training may hinder implementation (Ndungu & Otieno, 2020), these theories collectively suggest that strong M&E systems, skilled teachers, and effective accountability practices are essential for improving students' academic performance

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

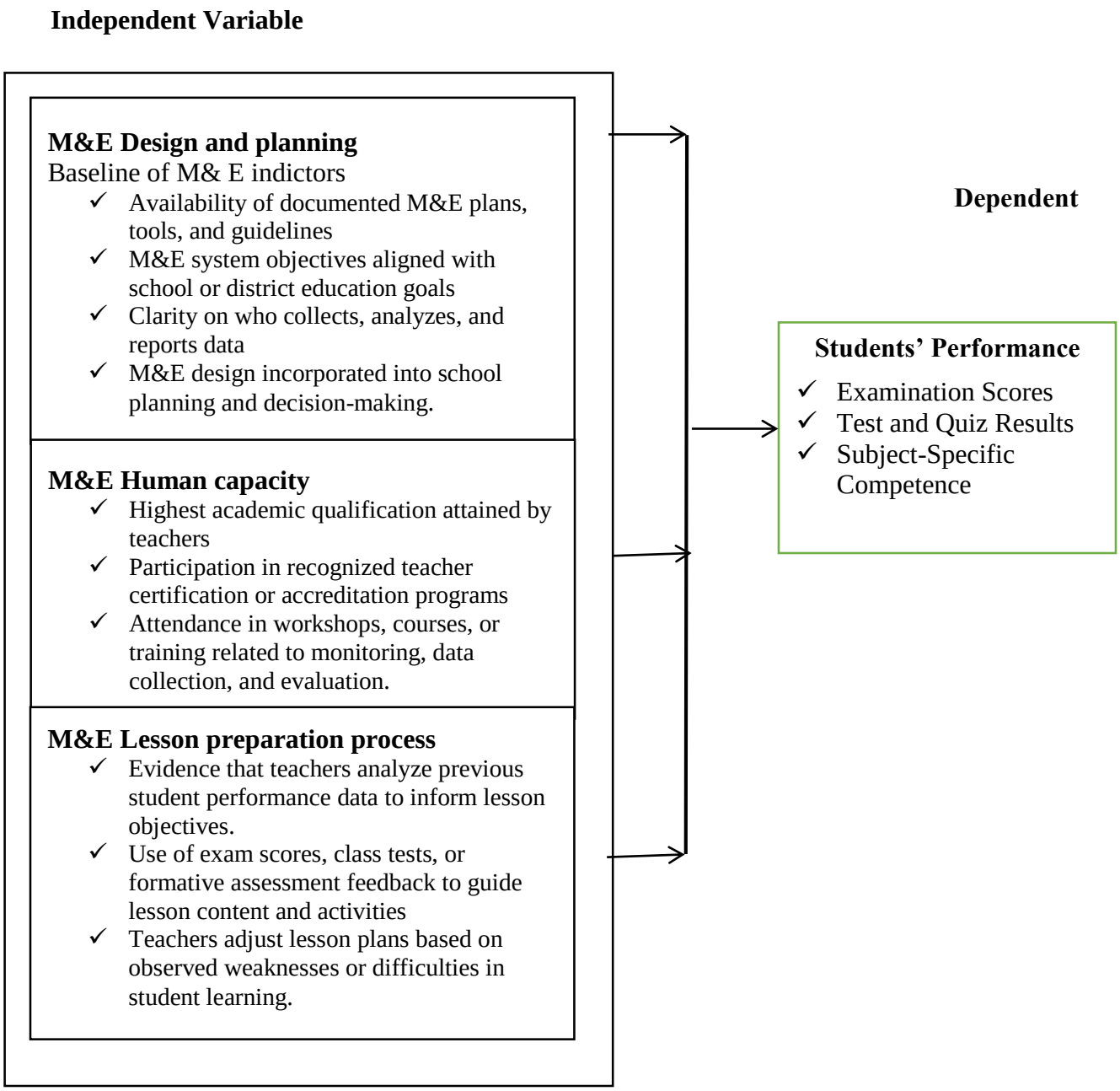


Figure 1: Conceptual Framework

Source: Research Data (2026)

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

3.0 Research Methodology

3.1 Research Design

This study employed an explanatory sequential mixed methods design. The quantitative phase measured the extent to which monitoring and evaluation (M&E) design and planning, M&E human capacity, and M&E of lesson preparation were associated with students' performance in Ordinary Level public day schools in Kicukiro District. The subsequent qualitative phase involved semi-structured interviews with sector and district education officers, head teachers, and directors of studies to explain the mechanisms behind the quantitative patterns, such as barriers to planning, capacity gaps, or weak feedback practices. This design was appropriate because recent studies in East Africa had shown that systematic M&E planning, capacity building, and data use were positively associated with improved educational outcomes (Ng'ang'a & Waweru, 2022; Odhiambo, 2023). The use of official performance data from the National Examination and School Inspection Authority (NESA) and administrative statistics from MINEDUC enhanced external validity, ensuring that the findings reflected authentic student achievement trends in Rwanda (MINEDUC, 2022; NESA, 2023).

3.2 Target Population

The study population consisted of all education stakeholders involved in Ordinary Level public day schools within Kicukiro District, Kigali City. This included teachers, directors of studies, headteachers, sector education inspectors (SEIs), and the district education officer/district director of education (DEO/DDE). The sample was drawn using a combination of census, purposive, and stratified random sampling strategies. Specifically, all district and sector officers were included (survey) because they were few in number and provided essential oversight insights. A total of 25 schools were selected using purposive random sampling, from which 25 headteachers and 25 directors of studies were purposively included as school level key informants. From the same schools, 710 teachers were randomly sampled to provide quantitative survey data, ensuring proportional representation of staff size. This sample size was statistically justified using Yamane's finite population formula at a 95% confidence level and 5% margin of error, adjusted for non-response (Ahmed, 2024). This approach balanced representativeness, feasibility, and statistical power, while ensuring that both individual and school level data were captured for multilevel analysis.

3.3 Sampling Techniques

A combination of census, purposive, and stratified random sampling was employed to ensure both inclusiveness and representativeness. For the District Education Officers and Sector Education Inspectors, a census approach was applied because the groups were very small, and including all members minimized the risk of losing critical perspectives. Census sampling is recommended when populations are small and manageable (Althubaiti, 2022). Headteachers and Directors of Studies were selected through purposive sampling to capture insights from information rich participants who play a direct role in planning, supervision, and implementation of Monitoring and Evaluation. Purposive sampling is particularly suitable in cases where the study requires the deliberate inclusion of participants with specialized knowledge (Campbell, 2020). For teachers, stratified random sampling was used, with stratification based on schools and subjects taught to ensure diversity and representativeness. The sample size for teachers was determined using Yamane's (1967) formula with a 5% margin of error:

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

$$n = \frac{N}{1 + N(e^2)}$$

$$n = \frac{710}{1 + 710(0.05^2)} = \frac{710}{1 + 710(0.0025)} = \frac{710}{1 + 1.775} = \frac{710}{2.775} \approx 256$$

Thus, a total of 256 teachers were selected. Stratification ensures representativeness and reduces sampling error in heterogeneous populations (Etikan & Bala, 2023)

3.4 Sample Size

The total sample size therefore comprised:

Table 1: Targeted Population vs Sample Size

Category	Population(N)	Sample(n)
District Education Officers(DEO/DDE)	2	2
Sector Education Inspectors	7	7
Headteachers	25	25
Director of studies	25	25
Teachers	710	256
	769	315

Source: Research Data (2026)

This mixed design was appropriate because it captured small but critical groups in full (census), ensured inclusion of leadership perspectives (purposive), and provided a statistically representative teacher sample (stratified random). Such a multi method approach is widely recommended in educational research where stakeholders differ in size, role, and significance (Besekar, 2024; Etikan & Bala, 2023).

3.4 Data Collections Methods

Data for this study on Monitoring and Evaluation (M&E) and ordinary level student performance in public day schools in Kicukiro District were collected using a combination of interviews, questionnaires, and document review to ensure comprehensive coverage across all stakeholder groups. Semi-structured interviews were conducted with District Education Officers and Sector Education Inspectors to obtain in-depth qualitative insights into M&E policies, supervision practices, and their impact on student performance (Campbell, 2020). Semi-structured questionnaires were administered to Headteachers and Directors of Studies to collect both quantitative and qualitative data regarding M&E implementation, lesson supervision, and school level performance trends, targeting information-rich participants (Althubaiti, 2022). For the larger

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

teacher population, a structured questionnaire was completed by a stratified random sample of teachers to collect standardized data on lesson preparation, classroom monitoring, and assessment practices (Etikan & Bala, 2023; Besekar, 2024). Additionally, document review of school records, examination results, and official M&E reports was conducted to triangulate the data, enhancing reliability, validity, and the comprehensiveness of findings (Creswell &Creswell, 2023).

3.5 Reliability and Validity

3.5.1 Reliability of the instruments

The reliability refers to the constancy and stability of the research instruments in measuring the intended variables. A reliable instrument yields the same results when administered under similar conditions in repeated studies (Ahmed & Ishtiaq, 2021). In this study, reliability was maintained through several measures. Pilot testing: the questionnaire was pre-tested with a sample of 10 teachers and education officers from a comparable secondary school involved in education projects. The pilot test helped to identify unclear or ambiguous items and assess internal consistency. After pilot testing, the Cronbach's Alpha was calculated to determine the inner consistency of Likert-scale items. A coefficient of 0.7 or above was considered acceptable for reliability (Izah, Sylva, & Hait, 2023).

Table 1: Reliability Test

Variable	α-Value
M&E Design planning	0.738
M&E Human capacity	0.845
M&E Lesson preparation	0.725
M&E performance of students	0.728
Average	**0.759**

Source: Research Data (2026)

The data presented in the above Table show that each variable had the Cronbach's alpha value above 0.7, with an overall average of 0.759. This showed that the instrument is reliable, as a coefficient of 0.7 or above is considered acceptable for reliability (Izah, Sylva, & Hait, 2023).

3.5.2 Validity of the instrument

Validity refers to the extent to which evidence and theory support the interpretation of scores for their intended purposes (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2024). In this study, content validity, construct validity, and face validity were established. First, the items in the questionnaire and interview guide were directly aligned with the conceptual framework and research objectives, covering the four key monitoring and evaluation (M&E) components: design planning, human capacity, lesson preparation, and students' academic performance. Expert review by professionals in education project evaluation and educational assessment was conducted to verify the relevance

and adequacy of the content coverage. Second, the instruments were reviewed by academic supervisors and experienced education researchers to ensure that they appeared to measure the intended concepts clearly and appropriately. Finally, the items were developed based on established constructs from M&E theory, educational evaluation literature, and studies on student performance, ensuring consistency with theoretical expectations. The structure of the instruments was also informed by previously validated tools used in educational research.

3.6. Data Analysis Procedure

Data collected for this study on Monitoring and Evaluation (M&E) and the performance of ordinary level students in public day schools in Kicukiro District were analyzed using both quantitative and qualitative techniques to ensure comprehensive interpretation.

Quantitative data, obtained primarily from structured questionnaires administered to a stratified random sample of teachers, as well as closed-ended items from Headteachers and Directors of Studies, were coded, entered, and analyzed using Statistical Package for the Social Sciences (SPSS, Version 28). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the data and describe the characteristics of participants and M&E practices. Inferential statistics, such as correlation and regression analyses, were employed to examine relationships between M&E practices and students' academic performance (Etikan & Bala, 2023; Besekar, 2024).

Qualitative data, obtained from semi-structured interviews with District Education Officers and Sector Education Inspectors, as well as open-ended questionnaire items from Headteachers and Directors of Studies, were analyzed using thematic content analysis. The steps included familiarization with the data, coding, categorization into themes, and interpretation of patterns and relationships relevant to M&E implementation and student performance (Creswell & Creswell, 2023; Campbell, 2020).

Documentary data from school records, examination results, and official M&E reports were analyzed using a combination of descriptive statistics and content analysis to triangulate findings from questionnaires and interviews. Triangulation enhanced the credibility and validity of the study by comparing evidence from multiple sources (Althubaiti, 2022).

The integration of both quantitative and qualitative analyses facilitated a mixed-methods interpretation, providing a detailed understanding of how M&E systems influence the performance of ordinary level students in public day schools in Kicukiro District.

Finally, the integration of quantitative and qualitative findings using a convergent parallel design allowed the study to cross-verify results and gain a holistic understanding of the impact of M&E systems. This enriched interpretation enhanced the credibility and explanatory power of the research conclusions.

Regression analysis on monitoring and evaluation to the student performance will be used to explore the effect of monitoring and evaluation implementation.
$Y = \beta_o+\beta_1X_1+\beta_2X_2+\beta_3X_3+\varepsilon$ Where:

Y = Students Performance

X_1=M&E Design and Planning

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

X_2 =M&E Human Capacity

X_3 = M&E Lesson Preparation

β_o =Intercept(Constant)

β1, β2, β3 = Coefficients for each independent variable

ε =Error term (random variable not explained by the model)

4. Findings

The inferential analysis was done based on the statistics of the model summary, ANOVA and coefficients below:

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std.Error of the Estimate
1	.851[a]	.724	.721	.38879

a. Predictors: (Constant), M&E Design and planning, M&E Human capacity, M&E Lesson preparation process.

Source: Primary Data (2026)

The regression analysis results

The regression analysis revealed a strong positive relationship between the independent variables M&E Design and Planning, M&E Human Capacity, and M&E Lesson Preparation Process and the dependent variable. The model's multiple correlation coefficient (R = 0.851) indicates a strong association between these predictors and the study outcome. The R Square value of 0.724 shows that 72.4% of the variation in the dependent variable is explained by the three M&E factors, demonstrating high explanatory power. The Adjusted R Square (0.721) is very close to the R Square value, confirming the stability and reliability of the model. Additionally, the low Standard Error of the Estimate (0.38879) suggests accurate predictions with minimal error. Overall, the findings indicate that M&E Design and Planning, Human Capacity, and Lesson Preparation are significant and reliable predictors of the study outcome.

Table 4: ANOVA

ANOVA[a]

Model		Sum of Squares	Df	Mean square	F	Sig.
1	Regression	97.537	3	32.512	215.089	.000[b]
	Residual	37.185	246	.151		
	Total	134.722	249			

a. Predictors: (Constant), M&E Design and planning, M&E Human capacity, M&E Lesson preparation process.

b.Dependent variable: Students' Performance

Source: Primary Data (2026)

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

The ANOVA results show that the regression model is statistically significant in explaining students' performance. The model explains a substantial portion of the variation in performance, with a regression sum of squares of 97.537 compared to a residual sum of squares of 37.185. The high F-statistic (F = 215.089) and the significance level (p = .000 < 0.05) indicate that the model is highly significant. Therefore, M&E Design and Planning, M&E Human Capacity, and M&E Lesson Preparation Process jointly have a significant effect on students' performance, leading to the rejection of the null hypothesis. Overall, the findings confirm that the regression model is appropriate and effective for predicting students' performance.

Table 5: Coefficients

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		**B**	Std.Err	**Beta**	t	Sig.
1	(Constant)	-129	.129		-1.007	.315
	M&E Design and planning	.284	.042	.287	6.830	.000
	M&E Human capacity	.187	.061	.152	3.043	.003
	M&E Lesson preparation process.	.587	.048	.552	12.151	.000

a.Dependent variable: Students' Performance

Source: Primary Data (2026)

Table 5 presents the multiple regression coefficient results showing the influence of Monitoring and Evaluation (M&E) Design and Planning, M&E Human Capacity, and M&E Lesson Preparation Process on Students' Performance. The coefficient analysis provides information about the direction, magnitude, and statistical significance of the relationship between each independent variable and students' performance. The results indicate that all three M&E dimensions positively contribute to students' academic achievement, although their levels of influence vary.

The regression model produced a constant (intercept) coefficient of B = -0.129 with a t-value of -1.007 and a p-value of 0.315. Since the p-value is greater than the significance level of 0.05, the constant is not statistically significant. This implies that when all independent variables are held constant at zero, the predicted value of students' performance would be -0.129. However, because the intercept is not significantly different from zero, it has limited practical interpretation in this study. The insignificance of the constant does not affect the validity of the regression model or the interpretation of the predictor variables.

The findings further reveal that M&E Design and Planning has a positive and statistically significant effect on students' performance (B = 0.284, β = 0.287, t = 6.830, p < 0.001). This indicates that a one-unit improvement in M&E design and planning leads to an increase of 0.284

units in students' performance while holding other factors constant. The standardized coefficient (β = 0.287) suggests a moderate contribution of this variable to students' academic achievement. The high t-value and significant p-value confirm the reliability of this relationship. The result implies that schools with effective M&E planning systems, clearly defined objectives, performance indicators, and structured monitoring processes are more likely to achieve improved student learning outcomes.

M&E Human Capacity was also found to have a positive and statistically significant influence on students' performance (B = 0.187, β = 0.152, t = 3.043, p = 0.003). The coefficient indicates that a one-unit increase in human capacity leads to a 0.187-unit increase in students' performance, assuming all other variables remain constant. Although the relationship is statistically significant, the standardized beta coefficient shows that M&E Human Capacity contributes less to students' performance than the other predictor variables. This finding suggests that improving teachers' and school administrators' knowledge, skills, and competencies in monitoring and evaluation can enhance educational outcomes. Investments in professional development, training programs, and technical support can therefore contribute positively to student achievement, although their effect is relatively smaller compared to lesson preparation and M&E planning.

Among all the predictor variables, M&E Lesson Preparation Process emerged as the strongest determinant of students' performance (B = 0.587, β = 0.552, t = 12.151, p < 0.001). The unstandardized coefficient indicates that a one-unit improvement in lesson preparation practices results in a 0.587-unit increase in students' performance while controlling for the effects of other variables. The standardized coefficient (β = 0.552) is the highest among all predictors, demonstrating that lesson preparation contributes most substantially to student achievement. The very high t-value and highly significant p-value provide strong evidence that lesson preparation plays a critical role in improving learning outcomes. This suggests that teachers who effectively plan lessons, utilize M&E feedback, prepare teaching materials adequately, and align classroom activities with curriculum objectives are more likely to enhance students' academic performance.

A comparison of the standardized beta coefficients reveals the relative importance of the predictor variables. M&E Lesson Preparation Process ranked first with a beta coefficient of 0.552, followed by M&E Design and Planning with a beta coefficient of 0.287, while M&E Human Capacity ranked third with a beta coefficient of 0.152. These findings indicate that lesson preparation has nearly twice the influence of M&E design and planning and more than three times the influence of M&E human capacity on students' performance. The results emphasize the central role of lesson preparation in translating monitoring and evaluation practices into improved classroom instruction and student learning outcomes.

Based on the unstandardized coefficients, the regression model can be expressed as: Students' Performance = -0.129 + 0.284(M&E Design and Planning) + 0.187(M&E Human Capacity) + 0.587(M&E Lesson Preparation Process). This equation shows that improvements in each of the three M&E dimensions are associated with increases in students' performance, with lesson preparation making the largest contribution to the model.

Overall, the coefficient analysis demonstrates that all three dimensions of Monitoring and Evaluation significantly and positively influence students' performance. M&E Lesson Preparation Process emerged as the most influential predictor, followed by M&E Design and Planning and M&E Human Capacity. These findings suggest that strengthening lesson preparation practices, improving the design and planning of M&E systems, and enhancing staff capacity in monitoring

and evaluation can substantially improve students' academic achievement in public day schools. The results provide empirical evidence that effective implementation of M&E systems is a critical factor in improving educational quality and student success.

5.0 Conclusions and Recommendations

5.1 Conclusion

Based on the findings of the study on Monitoring and Evaluation Systems and Performance of Ordinary Level Students in Public Day Secondary Schools in Kicukiro District, Rwanda, it can be concluded that effective monitoring and evaluation (M&E) systems play a significant role in enhancing students' academic performance. The study established that M&E design and planning, M&E human capacity, and M&E lesson preparation are critical components that contribute to improved educational outcomes.

Regarding M&E design and planning, the study concludes that well-structured M&E plans provide a clear framework for setting educational objectives, monitoring teaching and learning activities, and tracking students' progress. Effective planning facilitates timely identification of challenges and supports evidence-based decision making, which ultimately enhances students' academic achievement. This finding is consistent with Rwanda's national M&E framework, which emphasizes systematic planning, performance tracking, and continuous assessment for improved results.

Concerning M&E human capacity, the study concludes that the knowledge, skills, and competencies of school leaders, teachers, and M&E personnel significantly influence the effectiveness of M&E implementation. Schools with adequately trained staff are better able to collect, analyze, and utilize performance data for educational improvement. Capacity building and continuous professional development strengthen accountability, improve instructional practices, and contribute positively to student performance. Studies in Rwanda have similarly highlighted organizational capacity and staff competence as important determinants of successful M&E implementation and institutional performance.

With respect to M&E lesson preparation, the study concludes that regular monitoring and evaluation of lesson planning and classroom preparation enhance the quality of instruction delivered to students. Teachers who prepare lessons effectively and use feedback generated through M&E systems are more likely to employ appropriate teaching strategies, address learning gaps, and improve learner engagement. Furthermore, lesson-learning processes and continuous feedback mechanisms support instructional improvement and contribute to better academic outcomes among students.

Overall, the study concludes that strengthening M&E systems through improved planning, enhanced human capacity, and effective lesson preparation can significantly improve the performance of Ordinary Level students in public day secondary schools in Kicukiro District. Therefore, school administrators, education stakeholders, and policymakers should invest in robust M&E practices to promote quality education and sustainable improvements in student achievement.

Stratford Peer Reviewed Journals and Book Publishing
Journal of Education
Volume 9||Issue 1||Page 83-101 ||June||2026|
Email: info@stratfordjournals.org ISSN: 2616 - 8383

5.2 Recommendation

5.2.1 Recommendations for Practice

School administrators, teachers, and other education stakeholders should strengthen the implementation of monitoring and evaluation (M&E) systems to improve students' academic performance. This can be achieved through effective M&E design and planning, continuous capacity building for school personnel, improved lesson preparation and instructional supervision, and the use of student performance data to guide decision-making. Collaboration among parents, teachers, school leaders, and education authorities should also be enhanced to support students' learning and achievement.

5.2.2 Recommendations for Policy

The Ministry of Education, the Rwanda Basic Education Board, and other education authorities should strengthen policies that institutionalize M&E practices in public secondary schools. This should include providing clear implementation guidelines, regular training programs for school personnel, adequate financial and technological resources, and integrating M&E indicators into school accountability and quality assurance frameworks. Establishing standardized procedures for monitoring lesson preparation, instructional delivery, and student performance would further enhance educational quality and consistency.

5.2.3 Recommendations for Further Research

Future researchers should conduct similar studies in other districts of Rwanda to assess the generalizability of the findings and further explore the relationship between M&E systems and students' academic performance. Additional research should examine other dimensions of M&E, such as data management, stakeholder participation, feedback mechanisms, and technology-based monitoring systems. Longitudinal studies are also recommended to investigate the long-term effects of M&E practices on student achievement and school performance, as well as the challenges and opportunities associated with their implementation in public schools.

References

Ahmed, A. (2024). Determining appropriate sample size for educational survey research: Recent applications of finite population corrections. Journal of Educational Measurement and Statistics, 18(1), 34–49. https://doi.org/10. 1080/jems. 2024.18.1.34

Althubaiti, A. (2022). Sample size determination: A practical guide for researchers. BMC Medical Research Methodology, 22(1), 242. https://doi.org/10.1186/s12874-022-01687-5

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2024). *Standards for educational and psychological testing* (2nd ed.). American Educational Research Association.

Angrist, N., et al. (2023). Meta-analysis of malaria chemoprevention and cognitive outcomes in schoolchildren. World Bank Research Working Paper.

Bagnall, R., et al. (2020). Teacher human capital and student achievement in Brazilian primary schools: A quantile regression analysis. Economics of Education Review.

Besekar, S. (2024). Exploring sample size determination in educational research. F1000Research, 12, 1291. https://doi.org/10.12688/f1000research.141567.1

Campbell, S. (2020). Purposive sampling: Complex or simple? International Journal of Social Research Methodology, 23(6), 611–624. https://doi.org /10.1080/ 13645579.2020.1725496

Creswell, J. W., & Creswell, J. D. (2023). Research design: Qualitative, quantitative, and mixed methods approaches (6th ed.). SAGE Publications.

Crouch. (2020). Systems coherence and educational improvement through monitoring and evaluation. RISE Programme.

Dusabe, C. (2023). Monitoring, evaluation, accountability and evidence use in education projects: Reflections from Rwanda. International Journal of Educational Development, 100, 102732. https://doi.org/10.1016/j.ijedudev.2023.102732

Etikan, I., & Bala, K. (2023). Sampling and sampling methods in research methodology. International Journal of Research and Methodology in Social Science, 9(2), 45–52. https://doi.org/10.5281/zenodo.7645893

Etikan, I., & Bala, K. (2023). Sampling and sampling methods in research methodology. International Journal of Research and Methodology in Social Science, 9(2), 45–52. https://doi.org/10.5281/zenodo.7645893

Gatama, S. K., Otieno, P. O., & Waweru, S. N. (2023). Principals' instructional leadership and its influence on students' academic achievement in public secondary schools in Kenya. *East African Journal of Education Studies, 6*(1), 98–107. https://doi.org/10.37284/eajes.6.1.1135

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage Learning.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2022). *Multivariate data analysis* (8th ed.). Cengage Learning.

Kazaara, B., & Nelson, D. (2024). Teacher training and student performance: A case study of primary schools in Wakiso. East African Journal of Education Studies, 7(2), 145–158. https://doi.org/10.37284/eajes.7.2.1520

Khan, S., Siraj, D., & Ilyas, Z. (2024). Effect of lesson planning on academic performance: Evidence from the elementary level classroom. *Pakistan Social Sciences Review, 8*(1), 169–177. https://doi.org/10.35484/pssr. 2024(8-I)15

Kloker, S., Bukoli, H., & Kateete, T. (2024). New curriculum, new chance – Retrieval augmented generation for lesson planning in Ugandan secondary schools: *Prototype quality evaluation.* arXiv. https://arxiv.org/abs/2408.07542

Li, Y., et al. (2024). Psychological capital and academic performance among primary school students in China. Journal of Educational Psychology.

MINEDUC. (2023). Education Sector Strategic Plan 2018–2024. *Ministry of Education, Rwanda.*

Ministry of Education, Republic of Rwanda. (2022). Education statistical yearbook 2021/22. Ministry of Education. https://www.mineduc.gov.rw

Ministry of Education. (2024). Education sector strategic plan 2024–2029. Government of Rwanda.

National Examination and School Inspection Authority [NESA]. (2023). Annual performance report: Secondary education results. Government of Rwanda.

National Examination and School Inspection Authority. (2024). National examination performance report 2021–2024. Government of Rwanda.

National Institute of Statistics of Rwanda (NISR). (2022). Rwanda statistical yearbook 2022. NISR. https://www.statistics.gov.rw

Ndungu, M., & Otieno, D. (2020). Impact of instructional planning on students' academic outcomes in East African secondary schools. *East African Journal of Education and Social Sciences, 3*(1), 19–27.

Ng'ang'a, S., & Waweru, M. (2022). Monitoring and evaluation practices and educational outcomes in Sub-Saharan Africa: Evidence from Kenya. South Sudan Business and Finance Research Journal, 11(3), 89–104

Ochwada, J. (2023). Impact of lesson planning on student achievement in public primary schools in Kisumu County. International Journal of Education Research.

Odhiambo, P. (2023). Linking monitoring and evaluation capacity to school performance outcomes: Evidence from East Africa. International Journal of Finance, Management and Research, 15(2), 101–118.

Ruiza-Roza, et al. (2024). Exploring the role of lesson planning on prospective teacher professional skills at the University of Narowal: *A qualitative research study. Qlantic Journal of Social Sciences, 5*(2). https://www.researchgate.net/publication/385205922

Sekaran, U., & Bougie, R. (2020). *Research methods for business: A skill-building approach.*

Sibomana, J. P., & Ndayambaje, I. (2024). Teachers' professional development and job performance in public secondary schools of Kicukiro District, Rwanda. African Journal of Empirical Research, 5(3), 444–459. https://ajer.africa/index.php/ajer/article/view/233

UNESCO. (2023). Rebuilding Education Systems Post-COVID-19: *Teacher Preparedness and Resilience.* https://unesdoc.unesco.org/

UNICEF. (2021). Teacher workload and instructional quality in Sub-Saharan Africa. UNICEF.

UNICEF. (2022). Global annual results report 2022: *Goal area 2—Education. UNICEF*. https://www.unicef.org/reports/global-annual-results-2022-goal-area-2-education

Uwizeyimana, D. E., & colleagues. (2022). The case of public education in Rwanda during COVID-19. BMC Public Health, 22(1), 1832. https://doi.org/10.1186/s12889-

World Bank. (2021). Technical guidance on monitoring and evaluation for in-service teacher professional development. World Bank

World Bank. (2022). The State of Global Learning Poverty: 2022 Update. https://www. worldbank.org/en/topic/education/publication/state-of-global-learning-poverty

World Bank. (2023). Improving learning through data: *Strengthening education M&E in Africa.* World Bank Publications.

ZDM Review. (2023). Cognitive and affective determinants of lesson planning in mathematics education: A systematic review. ZDM Mathematics Education Journal.

ZDM Review. (2023). Empirical research on teacher competence in mathematics lesson planning: Recent developments. ZDM Mathematics Education. https://link.springer.com/article/10.1007/s11858-023-01487-2

Zhang, X., Wang, L., & Li, Y. (2020). The impact of professional development on teachers' instructional practices: Evidence from China. Teaching and Teacher Education, 89, 103-112. https://doi.org/10.1016/j.tate.2019.103019