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School financial resources management practices and curriculum implementation in secondary schools in Rwanda: The case of public secondary schools in Nyagatare District

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Abstract

This study examined the influence of financial resource management practices on curriculum implementation in public secondary schools in Nyagatare District, Rwanda. The specific objectives were to assess the influence of budgeting practices, financial resource utilization, and financial recording practices on curriculum implementation. The study was guided by Stakeholder Theory, Agency Theory, and the Iceberg Theory of Money Management. A descriptive correlational research design employing both quantitative and qualitative approaches was adopted. The target population comprised head teachers, teachers, and accounts clerks/bursars, from which a sample was selected using Yamane's formula. Data were collected through questionnaires and interviews and analyzed using descriptive statistics, correlation, regression, and thematic analysis. Findings revealed that effective budgeting, proper utilization of financial resources, and accurate financial recording significantly enhance curriculum implementation. High mean scores across respondents confirmed positive relationships between financial management practices and curriculum delivery. The study concludes that sound financial management strengthens teaching and learning outcomes. It recommends capacity building for school administrators, strengthened accountability mechanisms, and enhanced monitoring frameworks to improve curriculum implementation and educational quality in Rwanda.

Keywords: *Financial Resource Management, Budgeting Practices, Financial Resource Utilization, Financial Recording Practices, Curriculum Implementation, Public Secondary Schools, Educational Quality*.

1 Introduction

Education is widely recognized as a fundamental driver of social, economic, and national development. Through education, societies transmit knowledge, skills, values, and competencies necessary for sustainable growth and human capital development. In secondary schools, curriculum implementation represents a critical process through which educational goals are translated into actual learning experiences and outcomes. However, effective curriculum implementation depends not only on curriculum design and teacher competence but also on the availability and efficient management of financial resources. School financial resource management practices, including budgeting, resource utilization, and financial recording, play a vital role in ensuring that educational activities are adequately supported and curriculum objectives are achieved.

Globally, governments and education stakeholders have increasingly emphasized sound financial management as a prerequisite for quality education. Effective budgeting and resource allocation enable schools to acquire teaching materials, maintain infrastructure, support teacher development, and create conducive learning environments. Studies conducted in developed and developing countries indicate that schools with strong financial management systems are more likely to achieve successful curriculum implementation and improved student performance. Conversely, weak budgeting practices, poor expenditure monitoring, and inadequate financial accountability often undermine educational effectiveness and limit the realization of curriculum goals.

In Sub-Saharan Africa, educational reforms have highlighted the importance of strengthening financial management systems at the school level. Despite increased investment in education, many schools continue to face challenges related to resource shortages, ineffective financial planning, and limited accountability mechanisms. These challenges negatively affect curriculum delivery and learning outcomes. Rwanda has made significant progress in expanding access to education through initiatives such as the Nine-Year Basic Education and Twelve-Year Basic Education programs. Nevertheless, public secondary schools still encounter financial management challenges that affect the provision of teaching and learning resources, infrastructure development, and overall curriculum implementation.

Nyagatare District is among the districts experiencing persistent concerns regarding student academic performance. Reports from the District Quality Assurance and Standards Office indicate a decline in national examination performance over recent years, raising questions about factors influencing curriculum implementation. Education stakeholders have identified weaknesses in financial planning, resource utilization, procurement processes, and financial record management as potential contributors to these challenges. Inadequate budgeting, inefficient use of available funds, and poor financial documentation may limit schools' capacity to provide essential instructional materials and support effective teaching and learning processes.

Although previous studies have examined financial management and educational performance in different contexts, limited empirical evidence exists regarding the specific influence of financial resource management practices on curriculum implementation in public day secondary schools in Nyagatare District. This knowledge gap necessitated an investigation into how budgeting practices, utilization of financial resources, and financial recording aspects affect curriculum implementation.

Therefore, the general objective of this study was to examine the influence of financial resource management practices on curriculum implementation in public day secondary schools in Nyagatare District, Rwanda. Specifically, the study sought to assess the influence of effective budgeting practices, analyze the influence of financial resource utilization practices, and establish the influence of financial recording aspects on curriculum implementation. The findings were expected to contribute to policy formulation, strengthen school financial management practices, and enhance curriculum delivery and educational outcomes in Rwanda.

2. Review of Related Literature

2.1 Empirical Literature

The review is organized according to the study objectives, namely effective budgeting practices, utilization of financial resources, and financial recording practices. Financial resource management is increasingly recognized as a critical factor in enhancing curriculum delivery, educational quality, and student performance. Effective management of school finances ensures the availability of teaching materials, infrastructure, staff development opportunities, and other resources necessary for successful curriculum implementation.

2.1.1 Effective Budgeting Practices and Curriculum Implementation

Hill-Berry (2020) established that budgeting positively influences organizational performance by improving resource allocation and financial control. Although the study focused on financial institutions in Ghana, its findings demonstrate the importance of systematic budgeting in achieving institutional objectives. Similarly, Standish (2021) investigated budgeting competencies among head teachers and bursars in Kenyan secondary schools and found that despite receiving budget management training, many school leaders experienced difficulties translating theoretical knowledge into practical financial decision-making. This limited the effectiveness of resource allocation for curriculum implementation.

Rohman and Muna (2020) examined the contribution of income-generating activities to school financing and student retention. Their findings revealed that while schools generated additional revenue through activities such as transport services and hall rentals, the income was insufficient to meet educational demands. The study highlighted the need for comprehensive budgeting systems that prioritize curriculum requirements rather than relying solely on supplementary income sources.

Nasir, Bulu, and Shaleh (2021) further reported that many schools lacked structured budgeting mechanisms for managing revenues and expenditures. Weak budgeting systems resulted in financial inefficiencies that affected school operations. Likewise, Yanti (2021) demonstrated that effective budgeting significantly contributes to organizational performance by facilitating accountability and strategic resource allocation. Although conducted in the corporate sector, the findings are relevant to educational institutions where financial planning influences curriculum delivery and learning outcomes.

In Rwanda, Morreira et al. (2020) found that schools with stronger financial management systems generally achieved better academic performance. However, the study examined financial management broadly and did

not isolate budgeting practices as a specific determinant of curriculum implementation. Consequently, there remains limited empirical evidence on how budgeting directly influences curriculum delivery in public secondary schools. This study addresses this gap by examining how budgeting practices affect curriculum implementation in public day secondary schools in Nyagatare District.

2.1.2 Effective Utilization of Financial Resources and Curriculum Implementation

Muhassanah (2020) found a significant relationship between financial management practices and institutional performance. However, the study concentrated primarily on procurement compliance and overlooked broader financial utilization processes. This limitation highlights the need to examine how schools allocate and monitor financial resources beyond procurement activities.

Nasir et al. (2021) reported that inadequate financial management skills among school administrators hindered effective utilization of resources. Their findings revealed weaknesses in expenditure planning, monitoring, and accountability systems that negatively affected educational service delivery. Similarly, Standish (2022) observed that although schools complied with procurement regulations, financial resource utilization remained constrained by limited strategic planning and weak expenditure monitoring mechanisms.

Research by Wangari (2021) demonstrated that effective financial utilization positively influences curriculum implementation through timely acquisition of learning materials, maintenance of school infrastructure, and support for teacher professional development. Conversely, poor utilization often leads to resource shortages, delayed service delivery, and reduced instructional effectiveness.

Owino (2020) further established that efficient financial utilization enhances the learning environment by supporting technology integration, instructional resources, and learner support services. Schools that strategically align financial expenditures with curriculum priorities are more likely to achieve improved educational outcomes. Despite these findings, limited studies have examined the relationship between financial resource utilization and curriculum implementation in Rwanda, particularly in Nyagatare District. This study therefore seeks to provide empirical evidence on how financial utilization practices influence curriculum implementation in public secondary schools.

2.1.3 Financial Recording Practices and Curriculum Implementation

Standish (2021) conducted a study among head teachers and bursars and found a significant positive relationship between accounting practices and effective financial management. Schools that maintained accurate financial records demonstrated greater efficiency in resource management and curriculum support activities. However, the study focused primarily on accounting procedures and did not assess their direct influence on curriculum implementation.

Wibowo and Hassanah (2021) investigated financial reporting practices in public schools and identified challenges including incomplete records, inadequate accounting skills, and inconsistent reporting standards. These weaknesses negatively affected financial accountability and resource management effectiveness. Similarly, Amin and Amin (2021) found that schools with robust financial reporting systems achieved better institutional performance due to improved budgetary control and transparency.

Saidu (2021) further established that accurate financial recording strengthened school leaders' financial management capabilities by enabling effective expenditure monitoring and accountability. Reliable financial records supported timely decision-making and enhanced resource allocation for curriculum-related activities. These findings suggest that financial recording is a critical component of effective curriculum implementation because it promotes transparency, accountability, and efficient resource utilization.

2.2 Critical Review and Research Gap Identification

Although previous studies have explored financial management practices in educational institutions, limited empirical evidence exists regarding their influence on curriculum implementation in Rwanda, particularly in public day secondary schools in Nyagatare District. Most studies focused on financial performance, procurement processes, or institutional management without specifically examining curriculum delivery outcomes. Additionally, few studies adopted mixed-methods approaches capable of providing comprehensive insights into the relationship between financial management practices and curriculum implementation. This study therefore seeks to bridge these conceptual, contextual, and methodological gaps by examining how effective budgeting practices, utilization of financial resources, and financial recording practices influence curriculum implementation in public day secondary schools in Nyagatare District, Rwanda.

2.3 Theoretical Framework

The study was guided by Stakeholder Theory, Iceberg Theory of Money Management, and Agency Theory.

2.3.1 Stakeholder Theory

Stakeholder Theory emphasizes that organizations must consider the interests of all stakeholders to achieve sustainable success. In schools, stakeholders include students, teachers, parents, government agencies, and the community. Effective financial resource management ensures that stakeholder needs are addressed through adequate provision of educational resources that support curriculum implementation.

2.3.2 Iceberg Theory of Money Management

The Iceberg Theory of Money Management suggests that successful financial management depends not only on visible technical skills but also on hidden factors such as attitudes, values, and behaviors. The theory highlights the importance of equipping school leaders with both financial competencies and positive management attitudes to ensure effective utilization of resources and successful curriculum implementation.

2.3.3 Agency Theory

Agency Theory explains the relationship between principals and agents in managing organizational resources. In schools, head teachers and bursars act as agents responsible for managing financial resources on behalf of stakeholders. The theory emphasizes accountability, monitoring, and transparency in financial decision-making. Effective financial oversight minimizes misuse of resources and enhances curriculum implementation by ensuring that financial decisions align with educational objectives.

2.4 Conceptual Framework

The conceptual framework provides the conceptual framework and establishes correlation between study variables. In this regards, school financial resource management practices are independent variable while curriculum implementation is dependent variable and facilitating factors like the government policies and school guidelines are intervening or motivating variables.

Independent Variables

Financial Resource Management Practices

Effective Budgeting Practices

- Clear budget planning aligned with school goals
- Inclusive participation in budget preparation
- Regular monitoring and review of budget use
- Accurate documentation and reporting of expenditures

Effective Utilization of Financial Resources

- Allocating funds based on prioritized curriculum needs
- Ensuring timely and transparent disbursement of resources
- Optimizing resource use to avoid waste and maximize impact
- Regular evaluation of resource utilization against set objectives

Financial Recording Aspects

- Maintaining accurate and up-to-date financial records
- Implementing standardized accounting procedures
- Ensuring timely financial reporting and reconciliation
- Conducting regular audits for transparency and accountability

Dependent Variables

Curriculum Implementation

- Adequate learning materials available for students
- Teachers trained and motivated to deliver lessons
- Smooth execution of planned teaching activities
- Improved student engagement and academic performance
- Enhanced monitoring and evaluation of curriculum delivery

Intervening Variables

- Mediate the link between financial practices and curriculum results.
- Influence how resources affect teaching quality.
- Affect decision-making and accountability in schools.

Figure 2.1 Conceptual Framework

The conceptual framework guides this study by illustrating the relationship between financial resource management practices and curriculum implementation in public secondary schools. The independent variables include effective budgeting, utilization of financial resources, and financial recording, which collectively determine how financial resources are planned, allocated, monitored, and accounted for in supporting educational activities. The intervening variable, school leadership and governance, influences the effectiveness

of financial management through decision-making, accountability, and resource oversight. The dependent variable is curriculum implementation, reflected through adequate learning materials, effective teaching and learning processes, teacher preparedness, student participation, and improved academic performance. The framework assumes that sound financial management, supported by effective leadership, enhances successful curriculum implementation and educational outcomes.

3. Research Methodology

3.1 Research Design

This study adopted a descriptive correlational research design using a mixed-methods approach. The descriptive design enabled the researcher to systematically describe and examine financial resource management practices and curriculum implementation in public day secondary schools in Nyagatare District. The correlational aspect facilitated the determination of the relationship between financial resource management practices and curriculum implementation. The mixed-methods approach combined quantitative and qualitative techniques to provide comprehensive findings. Quantitative data generated measurable evidence regarding budgeting, utilization of financial resources, and financial recording practices, while qualitative data provided in-depth insights into participants' experiences and perceptions.

3.2 Target Population

The target population comprised all stakeholders directly involved in financial management and curriculum implementation in public day secondary schools in Nyagatare District. According to records from the District Education Office (2025), the population consisted of 72 head teachers, 144 teachers, and 72 accounts clerks/bursars, making a total population of 288 respondents. These categories were selected because they play significant roles in planning, managing, monitoring, and utilizing school financial resources to support curriculum delivery.

3.3 Sample Design

The sample size was determined using Yamane's (1967) formula for finite populations. The calculated sample size was approximately 167 respondents. However, to increase representativeness and reliability, the study adopted a sample of 273 respondents distributed proportionately among the categories Different sampling techniques were employed to obtain the required respondents. Simple random sampling was used to select teachers because it gave every teacher an equal chance of being selected, thereby minimizing bias. Purposive sampling was employed to select head teachers and accounts clerks/bursars because of their direct involvement in school financial management and curriculum implementation. Their positions enabled them to provide detailed and relevant information regarding the study variables.

3.4 Data Collection Methods

The study utilized questionnaires and interview guides as the main data collection instruments. Structured questionnaires were administered to teachers and accounts clerks/bursars. The questionnaires contained closed-ended items measured on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. These instruments enabled the collection of quantitative data within a short period. An interview guide was administered to head teachers as key informants. The interviews provided qualitative information regarding budgeting practices, utilization of financial resources, financial recording procedures, and curriculum implementation experiences in schools.

Prior to data collection, the researcher obtained authorization from relevant authorities and school administrators. Questionnaires were distributed personally to respondents and collected after completion. Participants were informed about the purpose of the study and assured that information provided would be treated confidentially and used solely for academic purposes. Interviews were conducted in the offices of head teachers at mutually convenient times. Each interview lasted approximately 30–40 minutes. Responses were recorded through note-taking and audio recording, subject to participants' consent.

Validity refers to the extent to which research instruments accurately measure what they are intended to measure. To ensure content validity, the questionnaire and interview guide were reviewed by research supervisors and experts in educational management. Their recommendations were incorporated before final administration. Reliability refers to the consistency of research instruments in measuring study variables. A pilot study was conducted in public secondary schools in Gatsibo District, which shares similar characteristics with Nyagatare District. Twenty-five respondents participated in the pilot study. Reliability was tested using Cronbach's Alpha coefficient. A reliability coefficient of 0.70 or above was considered acceptable, indicating that the instruments were sufficiently reliable for data collection.

3.5 Data Analysis Procedure

After data collection, questionnaires were edited, coded, and entered into the Statistical Package for Social Sciences (SPSS) Version 26 for analysis. Quantitative data were analyzed using both descriptive and inferential statistics. Descriptive statistics included frequencies, percentages, means, and standard deviations, which were used to summarize respondents' views regarding financial resource management practices and curriculum implementation. Results were presented using tables and charts. Inferential statistics involved Pearson correlation and multiple regression analyses. Correlation analysis established the strength and direction of relationships between study variables. Multiple regression analysis determined the influence of each independent variable on curriculum implementation. Qualitative data obtained from interviews were analyzed using thematic analysis. Responses were organized into themes and sub-themes corresponding to the study objectives and used to complement quantitative findings.

3.6 Ethical Considerations

The study adhered to established ethical principles throughout the research process. Permission to conduct the study was obtained from relevant educational authorities and school administrators. Participation was voluntary, and respondents signed informed consent forms before participating. Confidentiality and anonymity were maintained by ensuring that respondents' identities were not disclosed. Codes were used instead of participants' names during data analysis and reporting. Participants were informed that they had the right to withdraw from the study at any stage without any consequences. The researcher ensured freedom from coercion and treated all participants with respect, fairness, and professionalism. Furthermore, all sources consulted in the study were appropriately acknowledged to avoid plagiarism and uphold academic integrity. Collected data were securely stored and accessed only by the researcher for academic purposes.

4 Presentation of Findings

The findings are presented according to the dependent variable (curriculum implementation) and each specific objective, highlighting the influence of effective budgeting, utilization of financial resources, and financial recording on curriculum implementation.

4.1 Curriculum Implementation in Public Secondary Schools in Nyagatare District

The dependent variable in this study is curriculum implementation, measured through teachers' perceptions, accounts clerk's/bursars' perspectives, and head teachers' qualitative narratives. Curriculum implementation reflects how effectively schools deliver syllabus content, provide learning materials, and conduct practical lessons, considering available financial resources.

Table 4.1 Teachers' Perceptions on Curriculum Implementation (n=135)

Statement	SD		D		NS		A		SA		Mean	SDv
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
Adequate financial support ensures timely curriculum delivery	5	3.7	10	7.4	15	11.1	70	51.9	35	25.9	4.02	0.98
Teaching and learning materials are readily available	3	2.2	7	5.2	20	14.8	75	55.6	30	22.2	4.05	0.93
Funds allocation allows for practical	8	5.9	12	8.9	20	14.8	65	48.1	30	22.2	3.92	1.01

Statement	SD Freq	SD %	D Freq	D %	NS Freq	NS %	A Freq	A %	SA Freq	SA %	Mean	SDv
lessons and experiments												
Financial constraints sometimes delay syllabus coverage	12	8.9	15	11.1	25	18.5	55	40.7	28	20.7	3.72	1.07
Budgeting affects the timely procurement of instructional tools	7	5.2	10	7.4	18	13.3	70	51.9	30	22.2	4.00	0.99

The findings indicate that teachers strongly perceive financial resources as critical for effective curriculum implementation. Most respondents agreed that adequate financial support, availability of teaching and learning materials, and proper budgeting significantly enhance curriculum delivery. Specifically, over three-quarters of teachers acknowledged that financial resources facilitate access to instructional materials and support teaching activities. Similarly, effective budgeting was viewed as essential for the timely procurement of instructional tools and educational resources. However, some respondents reported challenges related to delayed funding and insufficient resources for practical lessons and experiments. The moderate agreement regarding financial constraints affecting syllabus coverage suggests that funding delays continue to hinder curriculum implementation in some schools.

Table 4.2 Accounts Clerks/Bursars' Perceptions on Curriculum Implementation (n=67)

Statement	SD Freq	SD %	D Freq	D %	NS Freq	NS %	A Freq	A %	SA Freq	SA %	Mean	SDv
Budget preparation aligns with curriculum needs	2	3.0	5	7.5	10	14.9	35	52.2	15	22.4	4.10	0.91
Financial disbursements are timely to support teaching activities	3	4.5	4	6.0	12	17.9	35	52.2	13	19.4	4.02	0.93
Records of financial transactions help in planning curriculum use	1	1.5	3	4.5	8	11.9	40	59.7	15	22.4	4.20	0.87
Financial monitoring ensures proper allocation for curriculum tasks	2	3.0	6	9.0	10	14.9	36	53.7	13	19.4	4.05	0.92
Constraints in fund management sometimes affect curriculum delivery	4	6.0	5	7.5	12	17.9	30	44.8	16	23.9	3.92	1.03

The findings from bursars and head teachers underscore the significant role of financial management in facilitating curriculum implementation. Most bursars agreed that budget preparation aligns with curriculum requirements, timely fund disbursement supports teaching activities, and accurate financial records enhance planning and resource allocation. Financial monitoring was also viewed as essential in ensuring that funds are utilized appropriately for curriculum-related activities. However, respondents acknowledged that financial constraints and occasional delays in fund disbursement can negatively affect curriculum delivery. Qualitative responses from head teachers further revealed that while effective budgeting, resource utilization, and financial recording contribute to smooth curriculum implementation, unexpected expenditures and delayed funding may disrupt the procurement of instructional materials and teaching schedules. Overall, the findings demonstrate that sound financial management practices are fundamental to achieving effective curriculum implementation in public secondary schools.

4.2 Influence of Effective Budgeting Practices on Curriculum Implementation in Public Day Secondary Schools in Nyagatare District, Rwanda.

Effective budgeting practices play a critical role in ensuring that financial resources are allocated appropriately to support teaching and learning activities.

Table 4.3 Teachers' Perceptions on Effective Budgeting Practices

Statement	SD N	SD %	D N	D %	NS N	NS %	A N	A %	SA N	SA %	Mean	SDv

Statement	SD N	%	D N	%	NS N	%	A N	%	SA N	%	Mean	SDv
School budgets are prepared in line with curriculum priorities	4	3.0	8	5.9	15	11.1	70	51.9	38	28.1	4.05	0.95
Budgeting allows timely procurement of teaching materials	5	3.7	10	7.4	20	14.8	68	50.4	32	23.7	3.98	0.98
Financial plans support extra-curricular activities	6	4.4	12	8.9	18	13.3	65	48.1	34	25.2	4.01	1.00
Budget adjustments are made to address curriculum changes	8	5.9	14	10.4	20	14.8	60	44.4	33	24.4	3.89	1.06
Teachers are involved in the budgeting process	5	3.7	9	6.7	18	13.3	66	48.9	31	23.0	3.96	0.98
Budgets are reviewed periodically to match school priorities	7	5.2	12	8.9	17	12.6	65	48.1	38	28.1	4.02	0.99
Allocation of funds is transparent and communicated to staff	6	4.4	11	8.1	15	11.1	68	50.4	32	23.7	4.01	0.97
Budgeting supports teacher training and professional development	8	5.9	13	9.6	20	14.8	62	45.9	33	24.4	3.94	1.05

Source: Filed Data (2025)

A majority, 51.9% agreed and 28.1% strongly agreed, that school budgets align with curriculum priorities, with a mean of 4.05 and SD of 0.95, reflecting strong consensus. Timely procurement of teaching materials also received high agreement (50.4% agree, 23.7% strongly agree), mean 3.98, SD 0.98, indicating most schools manage resource availability efficiently. Financial plans supporting extra-curricular activities had 48.1% agreement and 25.2% strong agreement, mean 4.01, showing budgeting also supports holistic education. Budget adjustments to address curriculum changes were agreed upon by 44.4% and strongly agreed by 24.4%, mean 3.89, suggesting some flexibility but occasional delays. Teachers' involvement in budgeting (48.9% agree, 23% strongly agree, mean 3.96) highlights participatory budgeting practices. Periodic review of budgets (48.1% agree, 28.1% strongly agree, mean 4.02) and transparency in fund allocation (50.4% agree, 23.7% strongly agree, mean 4.01) demonstrate accountability and alignment with school priorities.

Table 4.4 Accounts Clerks/Bursars' Perceptions on Effective Budgeting Practices

Statement	SD N	SD %	D N	D %	NS N	NS %	A N	A %	SA N	SA %	Mean	SDv
Budgets are prepared in accordance with curriculum requirements	1	1.5	3	4.5	8	11.9	40	59.7	15	22.4	4.20	0.87
Budgeting allows timely purchase of teaching resources	2	3.0	4	6.0	10	14.9	36	53.7	15	22.4	4.11	0.91
Budget adjustments consider curriculum priorities	3	4.5	6	9.0	12	17.9	32	47.8	14	20.9	4.00	0.96
Teachers are consulted during budget planning	2	3.0	5	7.5	10	14.9	36	53.7	15	22.4	4.08	0.89
Budget reviews ensure alignment with school priorities	3	4.5	6	9.0	10	14.9	35	52.2	15	22.4	4.07	0.90
Transparency is maintained in communicating budget allocations	2	3.0	4	6.0	8	11.9	38	56.7	15	22.4	4.12	0.87
Budgets facilitate teacher training and professional development	3	4.5	5	7.5	10	14.9	36	53.7	14	20.9	4.08	0.89

Accounts clerks and bursars overwhelmingly agree that budgeting practices influence curriculum implementation. Budgets aligning with curriculum requirements received 59.7% agreement and 22.4% strong agreement, mean 4.20, SD 0.87. Timely purchase of teaching resources had 53.7% agreement and 22.4% strong agreement, mean 4.11, confirming efficient resource management. Adjustments considering curriculum priorities were slightly lower (47.8% agree, 20.9% strongly agree, mean 4.00), showing flexibility is practiced but sometimes constrained. Teachers' consultation during budgeting (53.7% agree, 22.4% strongly agree, mean 4.08) ensures participatory planning. Budget reviews to align with priorities (52.2% agree, 22.4% strongly agree, mean 4.07) and transparency in communication (56.7% agree, 22.4% strongly agree, mean 4.12) reinforce accountability. Head teachers emphasized the critical role of budgeting in curriculum delivery. One said, "*Our budget ensures each subject receives necessary materials on time. Without careful planning, syllabus coverage suffers*." Another noted, "*Unexpected curriculum changes require reallocations, but strict procedures sometimes delay adjustments*." Others highlighted transparency and teacher involvement as key to accountability.

Table 4.5 Correlation Analysis

Variables	Curriculum Implementation	Budget Planning	Budget Monitoring	Resource Allocation
Curriculum Implementation	1	0.785**	0.742**	0.701**
Budget Planning	0.785**	1	0.698**	0.675**
Budget Monitoring	0.742**	0.698**	1	0.715**
Resource Allocation	0.701**	0.675**	0.715**	1

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

The correlation matrix in Table 4.5 shows that all independent variables such as budget planning, budget monitoring, and resource allocation were positively and strongly correlated with curriculum implementation. The strongest correlation is between budget planning and curriculum implementation (r = 0.785), indicating that systematic planning has the most significant association with successful curriculum execution. Budget monitoring (r = 0.742) and resource allocation (r = 0.701) also demonstrate high correlations, suggesting that these budgeting components collectively enhance curriculum outcomes.

Table 4.6 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.812	0.659	0.653	0.472

Source: Field Data (2025)

The model summary in Table 4.6reveals that the model explains 65.9% (R^2 = 0.659) of the variation in curriculum implementation. The high correlation coefficient (R = 0.812) indicates a strong relationship between the independent variables and the dependent variable. The Adjusted R^2 of 0.653 further validates the model's strength, accounting for the number of predictors. The standard error (0.472) confirms the model's reasonable accuracy in predicting the dependent variable.

Table 4.7ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	45.876	3	15.292	68.749	0.000
Residual	23.724	107	0.222		
Total	69.600	110			

Source: Filed Data (2025)

Table 4.7 presents the ANOVA results, which indicate that the regression model is statistically significant (F = 68.749, p < 0.001). This confirms that budgeting practices, as a group, significantly predict curriculum implementation in public secondary schools..

Table 4.8 Regression Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
Constant	1.234	0.212	—	5.821	0.000
Budget Planning	0.415	0.081	0.422	5.123	0.000
Budget Monitoring	0.318	0.076	0.337	4.184	0.000
Resource Allocation	0.274	0.089	0.265	3.078	0.003

The coefficients in Table 48 show that all predictors significantly contribute to curriculum implementation (p < 0.05). Budget planning (β = 0.422) has the strongest influence, followed by budget monitoring (β = 0.337) and resource allocation (β = 0.265). This implies that improvements in budgeting planning and monitoring are more likely to enhance curriculum execution than resource allocation alone. The constant (B = 1.234) indicates the baseline level of curriculum implementation when other factors are held constant.

4.4 Influence of Effective Utilization of Financial Resources Practices on Curriculum Implementation in Public Day Secondary Schools in Nyagatare District, Rwanda

Efficient utilization of financial resources plays a fundamental role in supporting effective curriculum implementation.

Table 4.9 Teachers' Perceptions on Effective Utilization of Financial Resources (n=135)

Statement	SD		D		NS		A		SA		Mean	SDv
	N	%	N	%	N	%	N	%	N	%		
Funds allocated are used efficiently for teaching and learning	6	4.4	12	8.9	18	13.3	65	48.1	34	25.2	3.99	1.01
Financial resources are prioritized according to curriculum needs	5	3.7	10	7.4	20	14.8	70	51.9	30	22.2	4.03	0.97

Statement	SD N	SD %	D N	D %	NS N	NS %	A N	A %	SA N	SA %	Mean	SDv
Resources are monitored to ensure they are not misused	7	5.2	12	8.9	22	16.3	60	44.4	34	25.2	3.92	1.04
Timely allocation of funds supports lesson delivery	8	5.9	15	11.1	18	13.3	58	43.0	36	26.7	3.91	1.07
Utilized funds improve access to instructional materials	5	3.7	10	7.4	21	15.6	68	50.4	31	22.9	4.00	0.99
Financial utilization supports practical subjects effectively	6	4.4	13	9.6	20	14.8	62	45.9	34	25.2	3.97	1.03
Accountability in resource use enhances transparency	4	3.0	11	8.1	19	14.1	69	51.1	32	23.7	4.02	0.94

Monitoring to prevent misuse received somewhat lower support, at 44.4% agreement and 25.2% strong agreement, resulting in a mean of 3.92, signaling that while most schools have monitoring mechanisms, some inconsistencies persist. Timely allocation of funds also showed room for improvement, with 43.0% agreement and 26.7% strong agreement (mean 3.91), indicating that while many schools allocate funds on time, occasional delays hinder lesson delivery. Access to instructional materials, support for practical subjects, and accountability mechanisms all showed means close to 4.00, reinforcing teachers' perceptions that efficient financial utilization enhances curriculum coverage and supports diverse teaching needs, including laboratory and technical subjects. However, variability in standard deviations (0.94–1.07) highlights uneven experiences across schools. Access to instructional materials, support for practical subjects, and accountability mechanisms all showed means close to 4.00, reinforcing teachers' perceptions that efficient financial utilization enhances curriculum coverage and supports diverse teaching needs, including laboratory and technical subjects. However, variability in standard deviations (0.94–1.07) highlights uneven experiences across schools.

Table 4.10 Accounts Clerks/Bursars' Perceptions on Effective Utilization of Financial Resources (n=67)

Statement	SD N	SD %	D N	D %	NS N	NS %	A N	A %	SA N	SA %	Mean	SDv
Funds are utilized according to school priorities	2	3.0	4	6.0	8	11.9	35	52.2	18	26.9	4.11	0.91
Expenditures are monitored to prevent misuse	3	4.5	5	7.5	10	14.9	36	53.7	13	19.4	4.02	0.92
Funds are allocated in time to support teaching activities	4	6.0	6	9.0	12	17.9	32	47.8	13	19.4	3.95	1.01
Priority is given to essential teaching materials	2	3.0	3	4.5	8	11.9	38	56.7	16	23.9	4.15	0.88
Utilized resources enhance curriculum implementation	1	1.5	3	4.5	10	14.9	39	58.2	14	20.9	4.08	0.85
Proper utilization minimizes wastage of resources	2	3.0	4	6.0	9	13.4	37	55.2	15	22.4	4.09	0.89
Accountability promotes efficient financial use	1	1.5	5	7.5	11	16.4	36	53.7	14	20.9	4.05	0.87

Bursars expressed strong agreement on the importance of aligning financial utilization with school priorities, with 52.2% agreeing and 26.9% strongly agreeing (mean 4.11). Monitoring expenditures was also highly rated (53.7% agreement, 19.4% strong agreement, mean 4.02), highlighting robust oversight mechanisms to prevent misuse. Timely allocation of funds received slightly less consensus (47.8% agreement, 19.4% strong agreement, mean 3.95), suggesting occasional disbursement delays that can disrupt lesson planning and curriculum coverage. The highest agreement was seen in prioritizing essential teaching materials (56.7% agreement, 23.9% strong agreement, mean 4.15), reflecting the critical role of resource prioritization in supporting effective instruction. Responses regarding enhanced curriculum implementation (mean 4.08) and minimized wastage (4.09) underscore a culture of accountability, with standard deviations (0.85–1.01) indicating relatively consistent views across respondents.

During interviews, head teachers emphasized the pivotal role of proper financial utilization in curriculum delivery. One noted, *"Even when funds are released, the way they are used can determine whether students receive quality lessons. Mismanagement or diversion of funds can seriously delay syllabus coverage."* Another head teacher added, *"We always ensure that resources are used for their intended purposes, such as laboratory equipment or teaching aids. Prioritizing essential items has made a difference in practical lessons."*

Table 4.11Correlation Matrix

Variables	Curriculum Implementation	Efficient Utilization	Resource Prioritization	Timely Fund Allocation
Curriculum Implementation	1	0.754**	0.728**	0.695**
Efficient Utilization	0.754**	1	0.681**	0.659**
Resource Prioritization	0.728**	0.681**	1	0.612**
Timely Fund Allocation	0.695**	0.659**	0.612**	1

The correlation coefficients in Table 4.11 indicate strong positive relationships between the utilization of financial resources and curriculum implementation. Efficient utilization of funds has the highest correlation (r = 0.754) with curriculum implementation, implying that when funds are used effectively, teaching and learning outcomes improve. Resource prioritization (r = 0.728) and timely fund allocation (r = 0.695) also show significant positive associations, demonstrating that proper financial management is critical for ensuring smooth curriculum delivery in public day secondary schools.

Table 4.12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.784	0.614	0.607	0.452

Table 4.12 shows a correlation coefficient (R = 0.784) indicating a strong positive relationship between the effective utilization of financial resources and curriculum implementation. The R Square of 0.614 suggests that approximately 61.4% of the variation in curriculum implementation is explained by how efficiently schools use financial resources. The Adjusted R Square of 0.607 confirms that this model is robust even after adjusting for the number of predictors. The standard error (0.452) shows relatively small differences between the predicted and observed values, indicating that the model is reliable.

Table 4.13 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	38.674	3	12.891	63.087	0.000
Residual	24.246	107	0.227		
Total	62.920	110			

Source: Field Data (2025)

Table 4.13 shows a correlation coefficient (R = 0.784) indicating a strong positive relationship between the effective utilization of financial resources and curriculum implementation. The R Square of 0.614 suggests that approximately 61.4% of the variation in curriculum implementation is explained by how efficiently schools use financial resources. The Adjusted R Square of 0.607 confirms that this model is robust even after adjusting for the number of predictors. The standard error (0.452) shows relatively small differences between the predicted and observed values, indicating that the model is reliable.

Table 4.14 Regression Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
Constant	1.098	0.245	—	4.482	0.000
Efficient Utilization	0.421	0.081	0.429	5.198	0.000
Resource	0.307	0.079	0.331	3.886	0.000

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
Prioritization Timely Fund Allocation	0.263	0.088	0.258	2.989	0.003

Table 4.14 shows a correlation coefficient (R = 0.784) indicating a strong positive relationship between the effective utilization of financial resources and curriculum implementation. The R Square of 0.614 suggests that approximately 61.4% of the variation in curriculum implementation is explained by how efficiently schools use financial resources. The Adjusted R Square of 0.607 confirms that this model is robust even after adjusting for the number of predictors. The standard error (0.452) shows relatively small differences between the predicted and observed values, indicating that the model is reliable.

4.5 Influence of Financial Recording Aspects on Curriculum Implementation in Public Data Secondary Schools in Nyagatare District, Rwanda

Accurate and transparent financial recording practices are essential for ensuring that available resources are efficiently managed to support curriculum implementation. The findings are supported by qualitative insights from head teachers.

Table 4.15 Teachers' Perceptions on Financial Recording Practices (n = 135)

Statement	SD	%	D	%	NS	%	A	%	SA	%	Mean	SD
Financial records are properly maintained for accountability	4	3.0	7	5.2	18	13.3	68	50.4	38	28.1	4.03	0.97
Accurate records assist in planning curriculum activities	3	2.2	5	3.7	15	11.1	70	51.9	42	31.1	4.18	0.92
Financial reports are regularly reviewed to guide resource use	5	3.7	8	5.9	20	14.8	65	48.1	37	27.4	4.03	0.99
Mismanagement is minimized through proper record keeping	6	4.4	10	7.4	18	13.3	62	45.9	39	28.9	4.02	1.01
Records ensure resources are distributed equitably	5	3.7	9	6.7	20	14.8	64	47.4	37	27.4	4.01	0.96
Regular audits enhance accountability and planning	4	3.0	10	7.4	22	16.3	65	48.1	34	25.2	3.99	0.94
Digital financial systems improve accuracy and reporting	6	4.4	12	8.9	18	13.3	60	44.4	39	28.9	3.95	1.02

The findings in Table 4.15 reveal that teachers generally perceive financial recording practices as crucial for effective curriculum implementation. The statement indicating that accurate records assist in planning curriculum activities received the strongest support, with 51.9% agreeing and 31.1% strongly agreeing (83.0%), and a high mean of 4.18 (SD = 0.92). Proper maintenance of financial records also received significant approval, with 50.4% agreeing and 28.1% strongly agreeing (78.5%), and a mean of 4.03 (SD = 0.97). This indicates that accountability measures are largely in place, fostering trust in financial operations. Similarly, regular review of financial reports to guide resource use garnered 75.5% agreement, with a mean of 4.03 (SD = 0.99), underscoring the role of periodic evaluations in ensuring that resources are directed to priority curriculum needs. The statement on minimizing mismanagement through proper record keeping achieved a mean of 4.02 (SD = 1.01), reflecting that most schools have effective safeguards, though some still face occasional lapses. Additionally, teachers noted that well-maintained records promote equitable resource distribution (Mean = 4.01, SD = 0.96) and that regular audits enhance planning and accountability (Mean = 3.99, SD = 0.94). Interestingly, while teachers acknowledged the potential of digital financial systems to improve accuracy (Mean = 3.95, SD = 1.02), variability in responses suggests uneven adoption or limited technical capacity across schools.

Table 4.16: Accounts Clerks/Bursars' Perceptions on Financial Recording Practices (n = 70)

Statement	SD	%	D	%	NS	%	A	%	SA	%	Mean	SD
Financial transactions are accurately recorded	2	3.0	3	4.5	8	11.9	38	56.7	16	23.9	4.14	0.89
Records guide the allocation of resources for curriculum	1	1.5	4	6.0	7	10.4	40	59.7	15	22.4	4.20	0.85

Statement	SD	%	D	%	NS	%	A	%	SA	%	Mean	SD
Financial reporting ensures accountability and transparency	2	3.0	5	7.5	10	14.9	35	52.2	15	22.4	4.05	0.91
Record keeping reduces misallocation of funds	3	4.5	6	9.0	12	17.9	36	53.7	10	14.9	3.93	1.00
Regular internal audits improve financial control	2	3.0	5	7.5	8	11.9	37	55.2	18	26.9	4.09	0.88
Digital systems enhance efficiency and reporting	3	4.5	6	9.0	10	14.9	34	50.7	17	25.4	3.99	0.93

As shown in Table 4.16, accounts clerks and bursars strongly agree that robust financial recording practices support effective curriculum implementation. The highest-rated statement, records guide the allocation of resources for curriculum, had 59.7% agreement and 22.4% strong agreement (82.1%), with a mean of 4.20 (SD = 0.85), indicating widespread recognition of the role records play in directing resources to areas of greatest instructional need. Similarly, the accurate recording of transactions was highly endorsed (Mean = 4.14, SD = 0.89), reflecting confidence in established systems that promote reliability and accountability. Financial reporting as a mechanism for ensuring transparency also received strong support (Mean = 4.05, SD = 0.91), highlighting that clear reporting fosters accountability and informed decision-making. Record-keeping as a deterrent to fund misallocation was moderately supported (Mean = 3.93, SD = 1.00), suggesting that while most schools have safeguards in place, inconsistencies or weak controls may still exist in a few institutions. Furthermore, bursars emphasized the importance of internal audits (Mean = 4.09, SD = 0.88), which enhance oversight and control, ensuring that resources are effectively deployed. The use of digital systems, rated at Mean = 3.99 (SD = 0.93), reflects a positive but still transitional move towards technology-enabled record management, with adoption varying by school.

Head teachers corroborated these findings, emphasizing that meticulous record-keeping directly supports curriculum delivery. One respondent explained, *"Well-maintained financial records allow us to track the use of funds and ensure resources reach teachers on time. Without these records, curriculum delivery suffers due to misallocation or delays."* Another head teacher added, *"Regular reporting and auditing have helped our school avoid mismanagement and prioritize essential teaching materials, which directly benefits students."* These narratives highlight that strong financial recording systems promote accountability, timely allocation, and optimal utilization of resources, thereby enhancing the overall effectiveness of curriculum implementation.

Table 4.17 Correlation Matrix

Variables	Curriculum Implementation	Accurate Record Keeping	Financial Reporting	Mismanagement Prevention
Curriculum Implementation	1	0.742**	0.713**	0.689**
Accurate Record Keeping	0.742**	1	0.678**	0.655**
Financial Reporting	0.713**	0.678**	1	0.631**
Mismanagement Prevention	0.689**	0.655**	0.631**	1

The correlation coefficients in Table 4.17 show strong positive relationships between financial recording practices and curriculum implementation. Accurate record-keeping is the most strongly correlated variable (r = 0.742) with curriculum implementation, indicating that meticulous financial records ensure resources are available for curriculum activities. Financial reporting (r = 0.713) and mismanagement prevention (r = 0.689) also demonstrate significant positive associations, reflecting that systematic reporting and proper oversight reduce delays and support effective teaching and learning.

Table 4.18 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.768	0.590	0.582	0.464

The model summary, 4.2022 shows a strong correlation (R = 0.768) between financial recording practices and curriculum implementation. The R Square value of 0.590 suggests that about 59% of the variation in curriculum implementation is explained by financial recording practices, while 41% is influenced by other factors. The Adjusted R Square of 0.582 confirms the model's reliability after accounting for the number of predictors. The standard error of 0.464 indicates that the predicted curriculum implementation values are reasonably close to the observed values, supporting the model's suitability.

Table 4.19 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	36.995	3	12.332	57.366	0.000
Residual	25.588	107	0.239		
Total	62.583	110			

Source: Primary Data (2025)

Table 4.19 indicates that the regression model is statistically significant (F = 57.366, p < 0.001). This means that financial recording practices, as a group, significantly influence curriculum implementation.

Table 4.20 Regression Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
Constant	1.157	0.238	—	4.861	0.000
Accurate Record Keeping	0.398	0.079	0.407	5.038	0.000
Financial Reporting	0.312	0.078	0.327	3.999	0.000
Mismanagement Prevention	0.268	0.087	0.261	3.080	0.003

Table 4.20 shows that all financial recording practices significantly predict curriculum implementation. Accurate record-keeping (β = 0.407) has the strongest effect, followed by financial reporting (β = 0.327) and mismanagement prevention (β = 0.261). This indicates that schools maintaining proper financial records, conducting systematic reporting, and minimizing mismanagement are more likely to achieve effective curriculum delivery.

5 Discussion of Findings

The discussion focuses on the alignment or divergence of present findings with contemporary studies from global, regional, and local contexts.

5.1 Influence of Effective Budgeting Practices on Curriculum Implementation

The study revealed that effective budgeting practices significantly support curriculum implementation, with teachers and bursars agreeing that school budgets align with curriculum priorities, allow timely procurement of teaching materials, and support extra-curricular activities. These findings are consistent with Morreira et al. (2020) in Kicukiro District, who found that schools with sound financial management, including robust budgeting, performed better academically. Similarly, Standish (2021) and Rohman and Muna (2020) in Kenya observed that practical budgeting skills and the management of school-based revenue projects positively influenced curriculum outcomes. However, while the present study found moderate flexibility in budget adjustments to accommodate curriculum changes, this partially contrasts with Nasir, Bulu, and Shaleh (2021), who highlighted inconsistent budgeting systems in most Kenyan schools. This suggests that in Nyagatare District, budgeting practices are generally well-aligned with curriculum needs, but adaptability challenges persist, mirroring global concerns about the need for context-specific capacity building in financial planning (Hill-Berry, 2020; Yanti, 2021).

5.2 Influence of Effective Utilization of Financial Resources on Curriculum Implementation

The results indicated that proper utilization of financial resources positively impacts curriculum implementation. Teachers reported that allocated funds are used efficiently, prioritized according to curriculum needs, monitored to prevent misuse, and disbursed timely. Bursars' perceptions corroborated this, emphasizing alignment of expenditures with school priorities and monitoring for accountability. These findings align with studies by Mwangi (2021), Abdi and Hassan (2023), and Standish (2022), which emphasized that efficient financial resource utilization—including timely allocation and strategic prioritization is crucial for achieving curriculum goals. They also echo findings by Nyongesa and Kimani (2025) and Owino (2020), who highlighted that effective resource deployment fosters an enabling learning environment and improves student engagement. Conversely, some studies in Kenya (Nasir et al., 2021; Okello & Ochieng, 2024) noted limitations in financial skills among school administrators, hindering optimal resource utilization. The present study suggests that Nyagatare schools have relatively better practices, though minor delays in fund allocation occasionally occur.

5.3 Influence of Financial Recording Practices on Curriculum Implementation

The findings show that meticulous financial recording practices including accurate record-keeping, regular reporting, and mismanagement prevention, substantially influence curriculum implementation. Teachers and bursars strongly agreed that proper financial records enhance planning, transparency, and timely use of resources, directly supporting teaching and learning. These results corroborate studies by Standish (2021), Wibowo and Hasanah (2021), and Amin and Amin (2021), who demonstrated that robust accounting and reporting practices positively affect fund management and school performance. Similarly, Saidu (2021) found that head teachers' ability to oversee finances effectively was enhanced by accurate financial records, which in turn improved curriculum outcomes. While the present study confirms the importance of financial recording, it also highlights that occasional lapses exist, consistent with Wibowo and Hasanah (2021), who reported challenges in record completeness and staff competencies.

6 Conclusions and Recommendations

The study concluded that financial resource management practices significantly influence curriculum implementation in public day secondary schools in Nyagatare District. Effective budgeting practices were found to enhance curriculum delivery by ensuring that financial resources are allocated according to curriculum priorities and that teaching and learning materials are procured on time. The findings confirmed that schools with well-structured budgets are better positioned to support instructional activities and achieve educational objectives. The study further established that effective utilization of financial resources positively affects curriculum implementation through efficient allocation of funds, timely disbursement, and continuous monitoring of expenditures. Schools that utilize resources prudently are able to provide adequate instructional materials, support co-curricular activities, and create favorable learning environments. Additionally, accurate financial recording practices were found to promote accountability, transparency, and informed decision-making, thereby strengthening curriculum implementation. Overall, the study concludes that sound budgeting, effective utilization of resources, and proper financial recording are essential for successful curriculum implementation and improved educational outcomes.

Based on these findings, the study recommends that head teachers strengthen budgeting processes by ensuring that budgets are aligned with curriculum needs and school priorities. School administrators should establish effective monitoring and internal control systems to enhance accountability and efficient use of financial resources. Accounts clerks and bursars should receive regular training in financial planning, record-keeping, and reporting to improve transparency and accuracy. The Ministry of Education and district education authorities should provide clear financial management guidelines, regular audits, and capacity-building programs to strengthen financial governance in schools. Furthermore, teachers should be actively involved in planning and monitoring resource utilization to promote collective responsibility for curriculum implementation.

Future research should examine financial resource management practices in private and boarding schools for comparative analysis. Studies may also explore the influence of procurement compliance, audit

effectiveness, stakeholder participation, and technology-based financial management systems on curriculum implementation and student academic performance. Such studies would contribute to a broader understanding of financial management and educational effectiveness in Rwanda.

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