

A Systematic Review on Financial Resource Management in Education

ABSTRACT

Education is an important foundation for the sustainable development of a nation, but it faces challenges in providing quality education. Resource management is essential in addressing these issues because it controls and directs resources to carry out school operations efficiently. Using the PRISMA paradigm, this systematic review examined the literature on resource management, with a focus on financial and human resources. Studies included in this review are focused on the challenges, practices, and recommendations of resource management in educational institutions, written in the English language and conducted between 2020 and 2024, from Google Scholar. Out of 46 records identified from database searching, 12 articles from six countries revealed three themes for the challenges of financial resource management, namely: limited funds, inadequate education and training, and misappropriation of budget. In terms of financial management practices, the analysis showed four themes for financial resource management, namely: budget planning procedures, reporting, financial resource empowerment, and partnership. Meanwhile, three themes appeared for the recommendations to improve financial resource management, such as collaboration, financial management processes, and financial management. These findings make it necessary to implement efficient financial resource management techniques to enhance educational institutions. However, managing resources posed challenges for schools. Thus, further approaches to solving the aforementioned issues may be investigated by researchers in the future. They can also explore problems, viewpoints, and strategies used by school administrators to manage resources other than those included in this study, such as technology and physical resources.

Keywords: Education; resource management; financial resources; literature review.

1. INTRODUCTION

Education is the key component of the sustainable development of any organization or nation. It shapes an individual's intellectual, social, and economic well-being and is an essential pillar of society's growth. To improve the quality of education, efficient resource management is essential. The development of curriculum, innovative teaching strategies, and student-centred learning techniques are supported by strategic planning and resource allocation, which enhance the educational process and foster academic success [1]. Adequate funds allow academic institutions to make investments in highly skilled educators, up-to-date teaching resources, technological infrastructure, and supportive learning environments.

Resource management in education plays an important role in ensuring the effective allocation and utilization of educational resources to

enhance learning outcomes and facilitate institutional success. Efficient resource management guarantees that educational institutions possess the instructional materials, textbooks, equipment, and infrastructure required to provide high-quality instruction [2-4]. Properly furnished classrooms, libraries, labs, and leisure areas create a favourable learning atmosphere that raises student participation and academic performance [5]. Additionally, it enables the provision of professional development opportunities, instructional support, and mentoring programs to enhance teaching quality and effectiveness [6].

The strategic planning, distribution, and application of financial resources to meet educational goals and objectives while guaranteeing financial responsibility and accountability is known as financial resource management in schools [7]. This process involves setting priorities, assessing needs, and allocating funds by educational goals. Yizengaw

& Agegnehu [8] define financial management as ensuring that budgetary funds are used wisely before approving purchases. It also seeks to supervise the implementation of spending plans in compliance with the budget or, if needed, elsewhere. It entails procedures for making financial decisions, managing expenditures, generating income, and creating budgets to make the most use of the funds available for enhancing staff and teacher development, maintaining facilities, promoting student achievement, and improving teaching and learning.

Resource management in education refers to the systematic arrangement, allocation, utilization, and supervision of various resources to enable effective teaching and achieve learning goals [1]. Education resource management encompasses a variety of aspects, including infrastructure, technology, human capital, and finances. Educational institutions can manage these frameworks for strategic planning, such as performance-based budgeting and data-driven decision-making, to help them distribute resources as effectively as possible while still accomplishing organizational goals [9].

Considering the importance of resource management, allocating and utilizing resources in educational institutions comes with challenges. Major challenges include scarce resources, conflicting goals, changing demographics, and sophisticated technology [10]. All of these factors make it challenging to allocate resources effectively: limited resources, conflicting objectives, shifting demographics, and technological advancements. The scarce financing source is one of the main obstacles to effective financial resource management in basic education. Many educational institutions have financial difficulties as a result of competing political agendas, economic downturns, or inadequate government funding. If schools lack financing for essential resources like technology, instructional materials, textbooks, and facility maintenance, the quality of education provided may suffer [6].

However, keeping school buildings secure and in good working order is crucial to creating a welcoming environment for learning. However, a lack of funding frequently leads to shoddy maintenance, out-of-date infrastructure, and repairs. Poorly maintained facilities endanger the health of staff and students, which has a detrimental effect on teaching and learning

results (McKenzie, 2021). Furthermore, variations in the distribution of resources among schools increase gaps in educational access and performance, highlighting the need for equitable resource allocation systems [6].

Furthermore, financing for education frequently originates from several sources, such as tuition fees, grants, donations, and government appropriations. Compliance with regulations while managing these various financing sources and guaranteeing their efficient use might be challenging [11]. Unequal funding among various schools or school districts adds to the inequality in educational possibilities. For finance managers in education, addressing these gaps and guaranteeing equitable resource distribution provide a problem [12]. Hence, it can be difficult yet necessary to maintain accountability for the use of funds and openness in financial operations, particularly in big educational institutions with decentralized decision-making processes [13].

To deal with these problems, organizations have their best practices for managing financial resources. The distribution of the available funding is one facet of school financial management. Equitable resource allocation is essential to address variations in educational opportunities and performance between schools and student groups. High schools and elementary schools should prioritize strategies for resource allocation that encourage justice, such as needs-based budgeting, targeted interventions for impoverished pupils, and weighted funding mechanisms [1]. Funds must be spent according to the budget. According to Igwe and Nwafor in Nnabuo, Okorie, and Agabiin Ekaette, Akeke, and Ekpenyong (2019), the principal of a school should make sure that funds are allocated in line with the financial regulations and procedures as well as his employer's instructions. To lower the likelihood of insufficient financing in schools, it entails creating a system that allows the process of allocating funds in schools to be transparent and ensures compliance with the budget's provisions.

Financial resource management encompasses audits in addition to budgeting. According to Joe [14], auditing is the process of looking at an entity's financial statements and data. We check to see if the business is profitable during this procedure. We methodically examine economic circumstances and behaviours. In addition, to guarantee accountability to stakeholders,

educational institutions uphold transparent financial systems and procedures. To preserve public confidence, this entails consistent financial reporting, internal controls, and external audits [15].

According to research by Nicolletti and Rabe, cited in Tyger [16], school-level expenditures in the UK on educational support staff and learning materials contribute to the reduction of the achievement gap between students from advantaged and disadvantaged backgrounds. Additionally, financial managers give school employees who handle finances training and possibilities for professional growth. This guarantees that staff members have the abilities and information required to properly manage financial responsibilities [17].

Additionally, Wanjala, Wamocha, and Sang [18] looked into the connection between the academic accomplishment of students in public secondary schools in Bungoma East Sub-County and the financial management strategies used by principals. The study found a substantial positive correlation between academic achievement in public secondary schools and the financial management strategies used by principals. As a result, principals with strong financial management practices scores also had good mean academic scores in their institutions.

Given the different challenges and practices employed by various organizations, recommendations emerge for enhancing the management of financial resources. According to Egea-Gomez et al. [19], schools should set up explicit finance management policies and procedures that prioritize accountability and openness. This entails consistent financial reporting, internal controls, and audits to guarantee adherence to laws and moral principles. In addition, educational institutions ought to implement performance-based budgeting strategies that associate financial allotments with certain learning objectives and performance metrics. According to Brunetti and Ferrari [20], this promotes resource allocation based on efficacy and efficiency, giving priority to projects that increase student performance.

Schools should also include a variety of stakeholders in the budgeting process, such as administrators, teachers, parents, and community members. According to Trujillo and Rebellon [21], including stakeholders increases buy-in, improves decision-making, and

encourages accountability for financial decisions. Additionally, to keep financial managers and staff up to date on industry best practices, laws, and new developments, schools should fund continuous professional development for them. Ongoing training guarantees that staff members have the abilities and know-how needed to handle money wisely [22]. When educational institutions manage their finances well, they can innovate and adapt to changing trends and demands in the field of education. Education technology, professional development, and research project financing all promote innovation in the processes of teaching and learning. Furthermore, flexible budgeting helps organizations respond to new crises like pandemics or economic downturns by redistributing resources to critical regions and implementing agile solutions [23].

It is crucial to perform a literature review on financial resource management in light of the issues and procedures that have been raised. Therefore, the purpose of this literature study was to provide financial resource management recommendations based on a variety of research and reviews that looked at how other educational institutions or schools handle their finances so that readers may think more clearly and comprehend the procedures. Based on the screened journals, these solutions were developed based on the experiences, interviews, survey data, opinions, and viewpoints of educators, instructors, and other relevant parties. This systematic evaluation also discussed how resource management affects everyone's awareness and direction.

2. METHODOLOGY

This study adheres to the systematic method by using Khan, Kunz, Kleijnen, and Antes's (2003) suggested five steps for conducting a systematic review. To identify relevant work, these steps involved framing review questions by clearly defining the problems to be addressed before starting the review work, determining selection criteria based on the review questions and documenting the reasons for inclusion and exclusion, assessing the quality of studies by considering the calibre of the searched journals, synthesizing the data to summarize the evidence, and interpreting the findings by investigating answers to the research questions.

2.1 Research Questions

This systematic review focused on the following research questions:

1. What are the existing pieces of literature about the challenges of financial resource management in educational institutions?
2. What are the available works of literature about the practices of financial resource management in educational institutions?
3. What proof in the literature is there for the recommendations to improve financial resource management in educational institutions?

2.2 Inclusion and Exclusion Criteria

This study examined the challenges, practices, and recommendations of resource management in educational institutions by reviewing pertinent periodicals. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) were used in this research to improve the reporting quality and discover relevant works out of the many sources that had to be filtered and screened by the eligibility criteria. Park, Suh, Woo, Kim, and Kim (2022) assert that this PRISMA checklist encouraged openness in the process of choosing studies. This also prompted authors to explain why certain papers were eliminated. As a result, this was employed to assess how comprehensively systematic reviews and meta-analyses were reported.

In searching for related reviews, we opened Google Scholar, navigated the “advance search” icon, and set up the inclusion criteria like “in the title of the article” and the year between 2022-2024. Then, we searched for “financial resource management” (46 results). After searching, we realized that there were only a few latest sources about resource management in education. There was only a total of 46 journals searched and saved in the Google Scholar Library. In order to

quickly check for duplications, we exported the articles from Microsoft Excel and sorted them from A to Z. However, there were none. Consequently, there were still 46 articles left. These were scrutinized based on the objectives of this systematic review until we screened 38 sources and excluded 26 sources. From these 46 journals, we retained 12 eligible sources for qualitative analysis and disregarded the 34 articles. Fig. 1 presents the PRISMA Flow Diagram of the Systematic Review.

When we screened the publications, we paid particular attention to the challenges, strategies, and impacts of resource management in educational settings. The inclusion and exclusion criteria for this review are shown in Table 1. Any type of research design—qualitative, quantitative, mixed techniques, or meta-analysis—was included. As a result, the research design was left open-ended. Furthermore, considering the caliber, applicability, and timeliness of these reviews on resource management in education, research carried out between 2020 and 2024 was also incorporated into the study. Lastly, for ease of reading, our evaluation covered published journals written in English.

However, the papers published before 2020, publications published in languages other than English, and other sources not found on Google Scholar were not included in this systematic review. In addition to these omissions, the proposed Literature Search Database for this work did not contain any irrelevant sources, even if they did contain the term “resource management.” As long as the sources used in this systematic review met these inclusion and exclusion criteria, they were relevant.

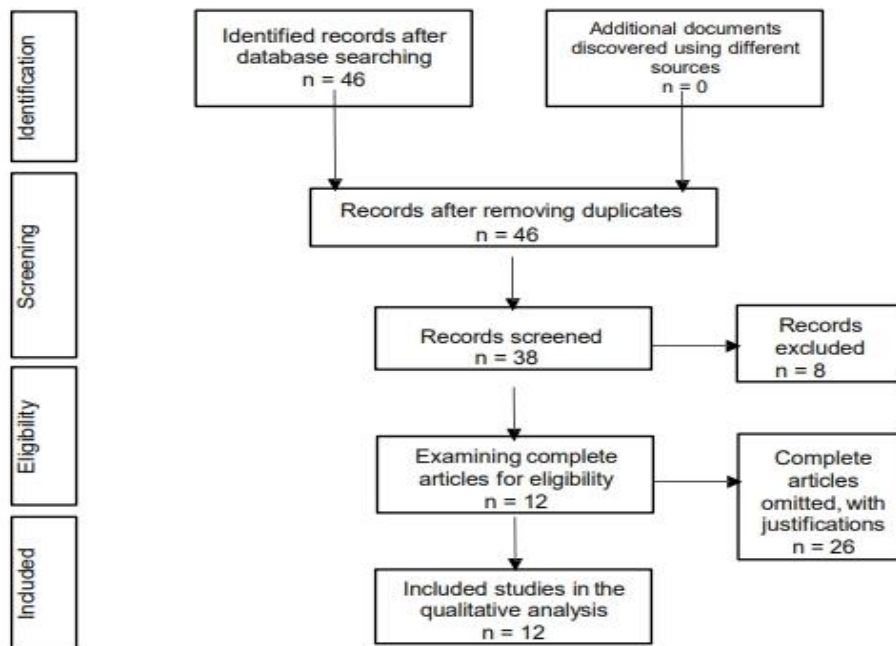


Fig. 1. PRISMA flow diagram of the systematic review

Table 1. Inclusion and exclusion criteria of the systematic review

Eligibility Criteria	Inclusion	Exclusion
Time Frame/ Years	2020-2024	Below 2020
Language	English	Other Languages
Methodology	Quantitative/ Qualitative/ Mixed Methods	
Electronic Databases	Google Scholar	Other Sources/ Inaccessible Studies
Publication Status	Published in Journals/ Books	

Table 2. Reviewed studies on resource management

ID	Author/s Year	Country	Discipline	Sample Size	Research Focus
1	Odide, et al. [24]	Kenya	Education	260	Examined the influence of financial resource management on the students' academic performance in public secondary schools in Lang'ata sub-county, Nairobi County- Kenya
2	Timothy & Michael [25]	Nigeria	Education	175	Investigated the relationship between financial resource management and quality service delivery in public primary schools in Port Harcourt Metropolis, Rivers State.
3	Nachinguru & Mwila [26]	Tanzania	Education	39	Examined the challenges that head of secondary schools experience when managing their financial resources.
4	Adebayo and Ilesanmi [27]	Nigeria	Education	100	Assessed the effectiveness of financial control in the public sector of Nigeria using Akoko South-West Local Government Area (ASWLGA)
5	Bii & Ogochi [28]	Kenya	Education	50	Established the influence of KEMI training for principals on the management of resources available in secondary schools
6	Lacsa [29]	Philippines	Education	165	Determined the level of practices and challenges in financial resource management implementation among secondary public schools in the Schools Division Office (SDO) of Laguna.
7	Yizengaw & Agegnehu (2021)	Ethiopia	Education	126	Investigated the practice and challenges of school financial resource management implementation in Bahir Dar city administration.
8	Bore (2024)	Ethiopia	Education	256	Examined the Practices of Educational Financial Resource Management and Utilization in Secondary School of Hawasa City Administration.
9	Zelege [30]	Ethiopia	Education	83	Assessed the practices and challenges of financial resource management in Government Secondary schools of West Hararghe Zone, Oromia
10	Ayenew [31]	Ethiopia	Education	123	Assessed the practice and challenges of school grant utilization in selected secondary schools of Bench Sheko zone south nation nationalities and people's region
11	Guo [32]	Australia	Education	N/A	Analyzed the problems of the college financial resource management and proposed relevant solutions.
12	Macharia et. al. [33]	Kenya	Education	350	Evaluated the influence of financial resource dynamics influence of performance on the achievement of total quality management.

2.3 Search Strategy

The documentation of the analysis method and inclusion criteria in this research adhered to the requirements. Using Google Scholar, we looked for relevant works. To quickly find the most recent and pertinent articles, we used the "advance search" icon to navigate and set up inclusion criteria such as "in the title of the article" and the year between 2020 and 2024. By looking at the title, reading the abstract to methodically include pertinent works, and even downloading the entire texts for comprehensive details, we meticulously filtered the searched articles. To adequately support the reviews that already existed, we looked through a variety of sources while gathering data. For improved search, every reference was appropriately recorded.

2.4 Data Extraction

For ease of reference, navigation, and citation, this systematic review extracted the author names, publication year, country, study design, participant characteristics, study aim, definition, results and discussion, conclusion, recommendations, implications, and resource management in education. The reviewed works on resource management in education are displayed in Table 2. Google Scholar was the source of all publications.

2.5 Data Analysis

Given the findings and reviews from different systematic reviews, this paper carefully analyzed the data. Using the table that contained systematic reviews with respective focus, data about resource management in educational institutions were analyzed through thematic analysis. Thus, themes for the challenges, strategies, and impact of resource management in education were formulated.

3. RESULTS AND DISCUSSION

The 12 reviewed articles in this paper came from six countries. These were distributed properly according to the following: Kenya (3), Nigeria (2), Tanzania (1), Philippines (1), Ethiopia (4), and Australia (1). Ten studies (83%) concentrated on basic education while 2 studies (17%) focused on higher education (see Table 3).

3.1 Financial Resource Management Challenges in Education

Based on the 12 reviewed articles, the resource management challenges are conveyed in three themes which are *limited fund*, *inadequate education and training*, and *misappropriation of budget*. Table 4 presents the challenges of resource management in education.

Limited Fund: The lack of funding for the management of financial resources is the subject of this theme. This has led to the development of two issues: unforeseen expenditures and insufficient fund allocation.

In terms of unforeseen Expenditures according to the Lacsas (2022) report, principals and school heads face difficulties managing PPA implementation, liquidation, transparency, and school facilities due to unforeseen expenditures. The initial financial plan or budget did not account for these expenses. They can result from several things, including accidents, rapid changes in regulations, equipment failures, legal problems, or natural calamities. This was also supported by the study of Bore [34] that one of the challenges for ineffective budget utilization is principals having a lot of activities to be accomplished rather than following budgetary process. Furthermore, Nachinguru & Mwila (2023) disclosed that the anticipated enrollment for the academic year is a factor in budget planning for schools. However, in the implementation of the budget, the expenditure figure appears to be higher than the amount of funds received from the government.

Concerning insufficient fund allocation, Odide, Nduku, and Ntabo (2022) concurred that it has an impact on how educational programs are carried out. This problem will slow down school operations. In addition, Lacsas (2022) discovered that insufficient funds allocation was noted as being quite noticeable in certain schools.

These themes and ideas generally suggest that managing financial resources in schools can be challenged by unforeseen expenditures and insufficient fund allocation. Budgeting for the school year might be challenging if unanticipated expenses arise that require immediate attention. In a similar vein, running a school with inadequate funding is particularly difficult. Thus, it is essential to take sufficient funding into account when managing financial resources.

Inadequate Education and Training: This issue pertains to the preparedness of school heads or principals who may be involved in inappropriate financial resource management practices. Three components make up this field, which was identified from the studied journals: *lack of financial guidelines and regulations and less expertise in financial management skills.*

Regarding the lack of financial guidelines and regulations the study conducted by Nachinguru and Mwila (2023) found that the absence of financial guidelines hinders school heads' capacity to oversee finances in their respective institutions. Additionally, major findings of the Bore [34] study indicate that there was a lack of adherence to financial guidelines and regulations when using school financing, as evidenced by the fact that financial reports were not presented on time, and supplies and goods were not acquired legally. However, Zeleke [30] found that a key obstacle to effective financial resource management in schools is the absence of precise financial regulations and guidelines. Although they are available, the school's financial resource management guidelines are out of date. As long as these issues persist, obstacles will not be removed.

While with less expertise in financial management skills, the results of Odide, Nduku, and Ntabo (2022) demonstrate that principals, bursars, representatives from boards of management, department heads, teachers, and student representatives all firmly agreed that secondary school principals faced a significant challenge in managing the school with less expertise. In addition, Bore [34] has revealed that ineffective use of school finances is a challenge, as principals are not skilled in managing budgets. Moreover, Ayenew [31] emphasized the high turnover of principals and seasoned school

actors, as well as the lack of awareness and skill gaps among teachers, PTAs, KETBs, and even school principals. Furthermore, Bii & Ogochi (2023) emphasized that it was evident before training that the majority of Principals lacked fundamental financial management abilities, including record-keeping, budgeting, accounting, and purchasing. Zeleke [30] indicates that school principals lacked the necessary skills, experience, knowledge, and dedication to manage financial resources well.

To sum up, school leaders manifested a lack of financial guidelines and regulations and less expertise in financial skills in financial management. Without clear guidelines and regulations, there's a higher risk of financial mismanagement, including misallocation of funds, fraud, and embezzlement. This can result in financial losses for the school and undermine its financial stability. This can hinder the school's ability to provide quality education and support services to students.

Improper Utilization of Budget: This issue pertains to how school heads budget the funds allocated per school. Two components make up this field, which were identified from the studied journals: Inappropriate budget utilization and lack of financial accountability and transparency.

Concerning inappropriate budget utilization the majority of participants in the study by Odide, Nduku, and Ntabo (2022) firmly agreed that the budget may consist of unachievable targets or standards that have an impact on how educational programs are implemented. This condition is in consonance to the study of Bore (2023) which stressed that may be the cause of improper budget usage is that schools did not use and spend their budget by plan.

Table 3. Distribution of the reviewed studies by Country and by Educational Level

Please check this table

Place of Publication / Study	Educational Level			Total
	Basic Education	Higher Education	Not Identified	
Kenya	2	1		3
Nigeria	2			2
Tanzania	1			1
Philippines	1			1
Ethiopia	4			4
Australia		1		1
Total	10	2		12

Table 4. Themes on the resource management challenges in education

Themes on the Resource Management in Education	Characteristics	Study ID	Number of Studies
Lack of Fund	Unforeseen expenditures	[3] [6] [3]	3
	Insufficient fund allocation	[1] [6]	2
Inadequate education and training	Lack of financial guidelines and regulations	[3] [8] [9]	3
	Less expertise in financial skills	[1] [8] [10] [5]	3
Improper Utilization of Budget	Inaapropriate budget utilization	[1] [6] [8]	3
	Lack of Financial Accountability and Transparency	[2] [8] [7] [9]	4

Table 5. Themes on the financial resource management practices in education

Please check this table

Themes on the Financial Resource Management in Education	Characteristics	Study ID	Number of Studies
Budget Plan	Pre-planning	[3] [9]	
	Budgeting	[1] [2] [3] [7]	
Reporting	Guideline Laws, Rules, and Protocols	[8] [9]	
	Recording, Bookkeeping, and Reporting	[3] [7]	
Financial Resource Management Empowerment	Seminars, Trainings and Workshops	[3] [5] [8]	
Partnership	Review and Evaluation	[4] [10] [12]	
	Stakeholders Engagement	[3] [8] [9] [10]	
	External Funds	[9] [3]	

In relation to lack of financial accountability and transparency. According to Bore [34], one obstacle to the inefficient use of the school budget is a lack of transparency in the administration of school funding. While Timothy & Michael (2023), emphasized that there is a strong and favourable correlation between public primary schools' quality service delivery and accountability as a financial resource management technique. Moreover, the findings of Yizengaw & Agegnehu's (2021) study verified that low levels of financial resource control functions are found in both government and private secondary schools. This suggests that the city government lacks a robust and well-organized framework for managing and overseeing financial resources. This could lead to improper use of funds and financial resource mismanagement in educational institutions. Therefore it results in inadequate audit results disclosure to the relevant bodies. On the other hand, one of the main issues with financial resource management in schools, according to the Zeleke [30], is the lack of transparency in

budget planning since stakeholders are not as involved in the school's financial utilization.

In summary, addressing the identified issues of budget utilization, transparency, and financial control is paramount to fostering efficient financial resource management and ultimately improving educational outcomes.

3.2 Financial Resource Management Practices in Education

Based on the comprehensive review of the 12 articles, we have identified four themes for financial resource management practices. The following are the themes: *Budget Planning Procedure, Reporting, Financial Resource Empowerment, and Partnership*. Table 5.presents the different themes of the financial resource management strategies in education.

Budget planning procedure: The planning procedure in managing financial resources is the subject of this theme. The budget planning

procedure involves several key steps to ensure effective financial management. This has led to the development of two issues: *pre-planning and budgeting*.

Pertaining to Pre-Planning: According to Nachinguru & Mwila [26], school board members and school administrators projected the expected student for the incoming academic year. On the other hand Zeleke [30] emphasized that to alleviate problems in financial management school administrators prepare training for stakeholders who will participate in financial resource management budget and preparing a participatory plan on school need-based assessments is crucial issue. The school created a financial plan based on pre-planned activities, weighted and prioritized accordingly.

With Regards to Budgeting: Odide, Nduku, and Ntabo (2022), selected school teachers participate in the preparation of the school's budget and financial plans, which are created by the financial committee or the board of management. While, Yizengaw & Agegnehu (2021) verified that department heads and accountants prepare budgets similarly for government and private schools. Furthermore, Timothy & Michael (2023) that there is a positive significant link between budgeting as a financial resource management measure and quality service delivery in their school.

In summary, pre-planning involves projecting student numbers for upcoming academic years and preparing training for stakeholders involved in financial management. Additionally, a crucial aspect of pre-planning entails creating a financial plan based on pre-planned activities, prioritized accordingly. It also underscores the positive impact of effective budgeting on quality service delivery within educational institutions. Overall, these ideas emphasize the importance of strategic planning and collaborative budgeting processes in ensuring effective financial resource management in education.

Reporting: This theme focuses on reporting as one of the practices in financial resource management. Through a variety of documents and presentations, it seeks to offer accountability, transparency, and insights into the financial performance and well-being of an organization. This has led to the development of two themes: *following guidelines and recording & reporting*.

Following Guidelines: In his study, Bore [34] found that government funding allocations follow to guidelines in order to carry out specified tasks in an efficient manner. Principals should be familiar with every relevant working knowledge of rules, regulations, department circulars, and other processes before managing any financial matters. The purpose of setting guidelines in financial resource management is to establish clear standards and procedures to ensure transparency, accountability, and effective allocation of resources. On the other hand, Zeleke (2023) revealed that Principals continued to face difficulties with accounting, auditing, planning, and the purchase of goods and services because some of them does not follow the guidelines financial resource management

Recording and Reporting: According to Yizengaw & Agegnehu [8] that private secondary schools do better than government secondary schools in reporting financial resource management practices. This might be because, in contrast to government schools, the leaders and accountants of the schools place more emphasis on reporting than on budget planning and utilization. However, it was discovered by Nachinguru & Mwila [26] that subject teachers who is assigned in liquidations in public schools neglected to present crucial records, including bank statements, meeting minutes, and financial standards. Eventually, the teachers acknowledged that they had prepared the needed documentation, but they had misplaced them.

In summary, the theme of reporting in financial resource management emphasizes the importance of accountability, transparency, and providing insights into an organization's financial performance. This involves the creation of various documents and presentations to communicate financial information effectively.

Financial Resource Empowerment: This theme focuses on empowerment as one of the practices in handling financial resource. Empowerment in financial management is to enable individuals or teams to make informed decisions, and contribute effectively to achieving organizational goals. Two themes have emerged as a result of this: *attending seminars and trainings and review and evaluation of Financial Resources*

Regarding attending seminars and trainings according to Nachinguru & Mwila (2023), the

respondents stated that they attended a number of seminars and workshops in order to acquire the aforementioned qualifications for managing financial resources successfully. Moreover, to Bii and Ogochi's (2023) research, principals who received training acquire skills in financial management, including budgeting, sourcing school finances, procurement and tendering, record keeping, and fund auditing. In addition, Bore (2023) revealed that financial management training is crucial for equipping school administrators and members of the finance.

While review and evaluate financial resources: The study of Adebayo & Ilesanmi (2020), the majority of respondents stressed the need of the local government's financial control system needing to be reviewed on a regular basis. This will decrease financial misappropriation and increase system efficacy. While, the study by Ayenew (2020) concludes that effective utilization (auditing, monitoring, transparency, and trust) of the school grant budget is achieved by the secondary schools through activities like review and evaluation systems that comply with guidelines, posting the total amount of the grant received on the school notice board, holding open discussions with stakeholders to ensure resource allocation needs, and depositing the grant budget into a bank account. The degree to which these activities are implemented in the schools has been agreed upon. Further, Guo (2022) offers a plan of improvement for assessing how to best manage and allocate financial resources in order to maximize the universities' financial reimbursement process.

Overall, the results indicate that financial resource empowerment is crucial in effectively managing financial resources within educational institutions. This empowerment involves enabling individuals or teams to make informed decisions and contribute effectively to organizational goals. These findings highlight the significance of empowerment and ongoing evaluation in achieving efficient financial resource management in education.

Partnership. The partnership between principals and other school stakeholders is the main focus of this theme. In financial resource management, partnership is sharing risks and benefits and combining resources, knowledge, and duties between two or more organizations in order to accomplish shared objectives. This has led to the

emergence of two themes: *involving stakeholders and external funds.*

With regards to involving stakeholders the results of Nachinguru & Mwila [26] indicate that financial transparency in schools is influenced by parental involvement in financial matters. While in his research, Bore [34] found that teachers and principals need to have a common understanding of how to prepare school finances for school budget plans to be in line with the educational aims and systems' objectives. On the other hand in order to prevent corruption and promote transparency, Zeleke [30] emphasized the importance of encouraging stakeholder participation in the financial resource management of schools. Additionally, Ayenew [31] is giving stakeholders the opportunity to use school grants by allowing them to take part in the planning, controlling, evaluating, and prioritization processes in secondary schools. Moreover, Vicente et al. [35] best practices in financial management: promoting stakeholder involvement, ensuring all stakeholders participate in the budgeting process, and establishing partnerships with external entities.

Concerning about external funds, Nachinguru & Mwila [26] revealed that politicians have an impact in some decisions made by school administrators. Certain initiatives, programs, and projects require more funding to be implemented, so assistance from other stakeholders is needed and most of the times politicians can provide the needed additional funds. Moreover, Zeleke [30] emphasized that majority of principals used multiple coping mechanisms to address the difficulties they encountered in managing their financial resources and actively pursued income generating project sources to support school development.

The summary underscores the critical role of partnership in financial resource management within educational institutions, emphasizing the collaboration between principals and other stakeholders to achieve shared objectives. Partnership entails sharing risks, benefits, and resources among organizations to accomplish mutual goals. The discussion highlights two key aspects of partnership: involving stakeholders and leveraging external funds. Overall, it showcases the significance of partnerships in navigating financial challenges and fostering transparency and development within educational institutions.

3.3 Financial Resource Recommendations in Education

Based on the comprehensive review of the 12 articles, we have identified four themes recommendations to improve financial resource management in education. The following are the themes: collaboration, financial management process, and financial management development. Table 5. presents the different themes of financial resource management strategies in education.

Collaboration: The main focus of this theme is collaboration. In financial resource management, collaboration entails teaming up with stakeholders to bring together resources, knowledge, and effort in order to accomplish common financial objectives and boost overall performance. Two themes have emerged as a result of this: *adopt team approach and stakeholder's participation.*

In relation to adopting team approach according to the findings of the study by Odide, Nduku, and Ntabo (2022), the principal should, through a concentrated effort, adopt a team approach by allowing various interested organizations and teachers access to the school's plans and activities. This will allow them to carry out their duties without interference, unless the appointed authority requests it. Public secondary schools need to have budget control, with all stakeholders participating in the budgeting process (Nadinguru & Mwila, 2023). Furthermore, Yizengaw & Agegnehu (2021) suggested that additional particular aspects not examined in this study should be considered in order to improve financial management in secondary schools, both public and private. Therefore, it is advised that schools, stakeholders, parents, and the education administration work together to identify these problems and take appropriate action promptly in order to lessen the challenges that schools are facing.

While in stakeholder participation, Yizengaw and Agegnehu (2021) suggest that schools need to be active participants in every activities, beyond the typical responsibilities of the schools alone. This is due to the important role that stakeholders play in improving student achievement. The stakeholders will be well-versed in the operations of the schools and aware of the ongoing initiatives requiring collaboration with both internal and external

organizations, including parents. According to Bore [34], in order to prevent the misappropriation of school funds, it is imperative that stakeholder participation be included in the financial utilization procedures of schools.

The summary underscores the importance of collaboration in financial resource management within educational institutions. Collaboration involves partnering with stakeholders to pool resources, knowledge, and effort to achieve common financial objectives and enhance overall performance. Overall, collaboration as a vital component in addressing financial challenges and fostering accountability and transparency within educational institutions.

Financial Management Process. The main focus of this theme is the financial management process. The financial management process in deals with planning, organizing, controlling, and monitoring of financial resources in order to effectively and efficiently accomplish organizational goals. As a result, four themes have emerged as a result of this: *budget preparation, financial audit, review & monitoring, following guidelines, rules and regulations, and transparency & accountability.*

Regarding budget preparation, the results of the study of Bore [34], suggests that during the preparation of budget plan schools should enhance their ability to acknowledge their priority and make sure that the most important activities and materials will be given priority. Furthermore, the study by Macharia, Chui, and Edabu (2020) suggests that the Ministry of Education make sure that funds are allocated to all technical training institutions on time.

While on financial audit, Timothy and Michael (2023) suggest that the State government conduct regular audits of school accounts to prevent financial resource misuse and abuse. Likewise, Ayenew [31] calls for attention to be conducted timely internal and external audits to be schools proper system of internal control. Also, Zeleke [30] suggests that school managers be required to establish an internal auditor committee and assist them in promptly checking school finances through the appropriate procedures.

Concerning review and monitoring, Adebayo & Ilesanmi [27] urge that the financial control system be reviewed on a regular basis. It will assist the public sector in making wise financial

resource decisions, which will help them accomplish their main goal of giving social and economic amenities to the people who live under their authority. Likewise, Zeleke [30] adds that maintaining the financial control system current and compliant with internationally recognized standards can be facilitated by conducting routine reviews of the system. In addition, Timothy and Michael advise school principals to make sure that financial resources are managed appropriately in order to guarantee the appropriate growth of school infrastructures and, consequently, an improvement in the provision of high-quality services.

With regards to following guidelines, rules and regulation, according to Adebayo & Ilesanmi [27], there should be constant supervision to ensure that the procedures and regulations are followed correctly. Similar to this, Bore [34] suggests that school administrators should have a commitment to manage school financial resources and follow finance rules and regulations to the letter, unless doing so is impossible to accomplish school goals. Where there is an indication of non-compliance, effective corrective action could be taken immediately. The finance rules and regulations must be followed for budget planning, accounting, auditing, purchasing, and reporting to be successful. In addition, Zeleke [30] PTA committee members must to adhere to the financial resources allocated by the schools and promptly address any issues that may arise during their actual work at the school level. School administrators should pledge to oversee the financial resources of the school and strictly adhere to financial rules and regulations. Furthermore, Macharia, Chui, and Edabu [33] recommend that Technical Training Institutions follow the procurement guidelines for instructional material purchase.

On the other hand transparency and accountability, Bore [34] recommends that schools should prioritize transparency in their budget and timely submission of financial reports to relevant bodies. Similarly, Ayenew [31] suggested that school principals and PTAs should always strive for greater accountability and transparency in their financial management practices. This is because the study's interview results also indicate that the biggest obstacles to using the grant budget are the lack of transparency regarding the activities that the budget is used for, the generally low level of trust and transparency, the information gap regarding

the procedure, and the use of the school grant for holiday ceremonies.

In summary, budget preparation it is important to prioritize activities and timely fund allocation. Financial audits aim to prevent misuse and ensure proper internal control. Review and monitoring promote wise decision-making and infrastructure growth. While, adherence to guidelines, rules, and regulations underscores the necessity of following financial protocols for successful budgeting, accounting, and procurement. Lastly, transparency & accountability are essential for disclosing financial reports and ensuring trust among stakeholders, particularly regarding grant budget usage.

Financial Management Development: The main focus of this theme is the financial management development. When discussing financial resource management in education, financial management development refers to the process of enhancing skills, knowledge, and practices to optimize the allocation, utilization, and monitoring of financial resources towards educational goals. As a result, two themes have emerged as a result of this: training and adopt best practices.

Concerning the training, according to Adebayo & Ilesanmi [27], the public sector should provide staff with effective financial control implementation training. Incorporating management in schools into the secondary teacher training college curriculum will equip teacher candidates for headship positions in the future. Bore [34]. The department must prepare training for school accountants and stakeholders in order to close the gaps in school resource management in secondary schools. Without instruction, schools found it challenging to manage their budgets. Moreover, Ayenew [31], practicing budget preparation, decision-making, and control procedures aids in our comprehension of the true application of grants. This also depends on the level of knowledge that various actors have about the process of developing policies. Because stakeholders need access to high-quality training during the policy-dissemination phase, secondary school administration and local government should plan and carry out regular, sufficient workshops and training sessions for stakeholders on how to effectively implement SIP, particularly with regard to school grant utilization, in order to increase participation [35,36].

With regards to adopt best practices, Lacsa's (2022) recommendation, school administrators should include the findings of this study into their list of financial resource management techniques to enhance their ability to handle potential difficulties and manage funds. The study's findings might help school finance officers by acting as a roadmap for potential techniques they could incorporate into their current procedures. Along with giving them a wider view on money management, this could also benefit their collaboration with the heads of the schools. According to Yizengaw & Agegnehu's (2021) results, private schools are focusing more on the reporting aspects of financial resource management procedures, whereas government schools place a greater emphasis on planning. Both the schools should include all functions and practices of financial resource management to better implement and maximize the gains from other functions in order to foster the schools overall performance. Therefore, both schools need to work on all functions appropriately and strike a balance between the functions in order to bring the schools more effective and efficient [37].

In summary, it emphasizes the necessity of training for school accountants and stakeholders to improve resource management, enhance comprehension and ensure effective grant utilization. In terms of adopting best practices, integrating study findings into financial management techniques to address potential challenges and improve fund management. Both sub-themes stress the significance of continuous improvement and comprehensive implementation to achieve effective financial resource management in educational institutions.

The review highlights the importance of collaboration, robust financial management

processes, and continuous development in financial resource management within educational institutions. Policymakers should mandate a team approach and stakeholder participation in financial planning, ensuring transparency and inclusivity. Regular training for stakeholders and clear frameworks for their involvement can enhance accountability and trust. Schools must prioritize activities that align with their strategic goals, with policies supporting comprehensive budget plans and regular financial audits to prevent mismanagement. Adhering strictly to financial guidelines and maintaining transparency through public disclosures can further strengthen accountability. These practices should be adapted to different educational systems worldwide, considering their specific regulatory environments and unique challenges.

Investing in financial management development through continuous professional development and the adoption of best practices is crucial. Policies should mandate regular training for school accountants and administrators, incorporating financial management into teacher education programs. Schools should integrate best practices into their standard procedures, continuously evaluating and updating them based on emerging trends and research findings. Different educational systems can implement these recommendations by developing tailored training modules and best practice frameworks, establishing collaborative networks to share knowledge. Effective financial management can lead to sustained improvements in educational infrastructure and resources, positively impacting student learning and achievement, ultimately fostering a conducive learning environment and better educational outcomes globally.

Table 6. Themes on the recommendations to improve financial resource management in education

Themes on the Impact Of Resource in Education	Characteristics	Study ID	Number of Studies
Collaboration	Adopt a team approach	[1] [3] [7]	
	Stakeholder Participation	[7] [8]	
Financial Process	Budget preparation	[2] [8] [12]	
	Financial Audit	[2] [10] [9]	
	Review & Monitoring	[4] [2] [9]	
	Follow Guidelines, Rules and Regulations	[4][8] [9] [12]	
Financial Management Development	Transparency & Accountability	[8] [10]	
	Training	[4] [5] [8]	
	Adopt Best Practices	[10] [9]	
		[6] [7]	

The review highlights the importance of collaboration, robust financial management processes, and continuous development in financial resource management within educational institutions. Policymakers should mandate a team approach and stakeholder participation in financial planning, ensuring transparency and inclusivity. Regular training for stakeholders and clear frameworks for their involvement can enhance accountability and trust. Schools must prioritize activities that align with their strategic goals, with policies supporting comprehensive budget plans and regular financial audits to prevent mismanagement. Adhering strictly to financial guidelines and maintaining transparency through public disclosures can further strengthen accountability. These practices should be adapted to different educational systems worldwide, considering their specific regulatory environments and unique challenges.

Addressing ethical considerations is also crucial in the context of financial management in education. Ensuring transparency and accountability is not just a best practice but an ethical imperative, as it fosters trust and integrity within the educational community. Ethical allocation of resources requires that funds be used equitably to support all students, particularly those from disadvantaged backgrounds. Regular audits and transparent reporting mechanisms can prevent the misuse of funds and ensure that financial resources are used for their intended purposes. Policies should enforce strict adherence to financial regulations and promote ethical decision-making among school administrators and stakeholders. Effective financial management, grounded in ethical principles, can lead to sustained improvements in educational infrastructure and resources, positively impacting student learning and achievement, and ultimately fostering a conducive learning environment and better educational outcomes globally [38,39].

4. CONCLUSION

The goal of this study was to present a thorough analysis, drawing from a variety of sources, of the issues, strategies, and suggestions related to improving financial resource management in educational establishments. This work used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) in accordance with the systematic method. This

acts as a guide for determining the requirements for relevant works' inclusion and exclusion.

This research used Google Scholar to find relevant papers. The period covered was 2020–2024. In order to eliminate duplicate reviews and provide sufficient evidence to justify the ones that already existed, the authors looked through a variety of sources when gathering data. For improved search, every reference was appropriately recorded. To carefully extract data, journals were thoroughly inspected. This work used a thematic analysis approach to thoroughly examine the data based on the 12 examined publications from the six nations. The challenges, practices, and recommendations for enhancing financial resource management in education have been identified by the researchers. Three themes emerged for the challenges of resource management, namely: lack of fund, inadequate education and training, and improper utilization of budget. On the other hand, the resource management practices were conveyed in four types: budget plan, reporting, financial resource management improvement, and collaborative effort. Meanwhile, four themes emanated for financial resource management strategies such as collaboration, financial process, and financial management development. These results demonstrated how important financial resource management is for managing and allocating resources in order to successfully carry out school operations.

The issues that emerge from the journals are crucial to the governance of educational institutions, particularly in the area of financial resource management. Effective resource management is hampered, nevertheless, by issues with funding, inadequate education and training, and inappropriate budget usage. As a result, the methods and implications of resource management are provided in this systematic study for educational key player guides. Every educational leader can use this as motivation to implement suitable ways for managing human and financial resources as needed. Furthermore, this work provides additional avenues for future research to concentrate on proactive measures to overcome the obstacles discussed in this analysis, particularly in overcoming ineffective management practices. Additionally, they might explore the viewpoints of school administrators regarding the challenges they faced in identifying root causes, taking prompt action to address them, and preventing future occurrences. It would also be interesting to explore the

challenges and practices school administrators have when managing resources not included in this study, such as technology and physical resources, which are just as important to achieving academic goals and objectives.

DISCLAIMER: ARTIFICIAL INTELLIGENCE

The author(s) hereby declare that NO generative AI technologies such as Large Language Models (e.g., ChatGPT, Copilot, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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