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RESOURCE MANAGEMENT AND TEACHER EFFICIENCY IN SELECTED PRIMARY SCHOOLS IN YAOUNDE II SUBDIVISION

A Dissertation presented and defended on the 26th September 2025

Option: **Educational Management**

Speciality: **Administration and Inspection of School Life**

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DECLEARATION

The researcher wrote the project titled “Resource Management and Teacher Efficiency in Selected Primary Schools in Yaoundé II Subdivision” **Yuh Blessing Andiensa** (Matricule: 23w3534). This project is my endeavour, and all borrowed ideas have been acknowledged.

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CERTIFICATION

This is to certify that this research work titled Resource Management and Teachers efficiency in selected primary schools in Yaoundé II subdivision is a bon fit record of independent research work, done by Yuh Blessing Andiensa under my supervision and submitted to the university of Yaoundé 1 in fulfilment for an award of a Master's Degree in Educational Management, speciality Administration.

Name: Dr. Lawrence Ntam Nchia

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To my children Akinimbom Fortress Sam and Ajimsimbom Kayden Sam

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LIST OF ACRONYMS

RMP – Resource Management Practice

TE – Teacher Efficiency

SPSS – Statistical product for service solution

EFA – Exploratory Factor Analysis

PCA – Principal Component Analysis

SEM – Structural Equation Modelling

CFA – Confirmatory Factor Analysis

MINEDUB – Ministry of Basic Education

RBV – Resource Base View

ABSTRACT

This study investigates the relationship between resource management and teacher efficiency in selected primary schools within the Yaoundé II Subdivision, Cameroon. It aims to explore how the allocation, utilization, and maintenance of both human and material resources affect the performance and productivity of teachers. The research adopted a mixed-methods approach, combining quantitative surveys and qualitative interviews with headteachers, teachers, and administrative staff. Findings revealed that effective resource management—particularly in areas such as instructional materials, classroom infrastructure, and teacher workload planning—significantly enhances teacher efficiency. Conversely, poor resource planning and limited availability of teaching aids contribute to reduced motivation and classroom effectiveness. The study concludes that improving resource management practices can play a vital role in boosting educational outcomes. It recommends policy reforms and capacity-building programs to support school leaders in optimizing resource use for improved teaching performance.

RÉSUMÉ

La présente étude examine la relation entre la gestion des ressources et l'efficacité des enseignants dans certaines écoles primaires de l'arrondissement de Yaoundé II, au Cameroun. Elle vise à analyser comment l'allocation, l'utilisation et l'entretien des ressources humaines et matérielles influencent la performance et la productivité des enseignants. Une approche méthodologique mixte a été adoptée, combinant des enquêtes quantitatives et des entretiens qualitatifs avec les directeurs d'école, les enseignants et le personnel administratif. Les résultats ont montré que la gestion efficace des ressources — notamment en ce qui concerne les supports pédagogiques, les infrastructures scolaires et la répartition des charges de travail — améliore significativement l'efficacité des enseignants. En revanche, une mauvaise planification des ressources et le manque de matériel didactique freinent la motivation et la performance en classe. L'étude conclut que l'amélioration des pratiques de gestion des ressources peut jouer un rôle clé dans l'optimisation des résultats scolaires. Elle recommande des réformes politiques ainsi que des programmes de renforcement des capacités pour aider les responsables scolaires à mieux gérer les ressources au service de la qualité de l'enseignement.

CHAPTER ONE
GENERAL INTRODUCTION

Education is universally recognized as a key driver of socio-economic development and national progress. In this context, the efficiency of teachers plays a crucial role in ensuring quality education at all levels, particularly in primary education, which lays the foundation for lifelong learning. However, teacher efficiency does not exist in isolation; it is closely linked to how educational resources—both human and material—are managed within the school environment.

Effective resource management, including the allocation, utilization, and maintenance of teaching aids, classrooms, textbooks, and other instructional materials, significantly influences the teaching and learning process. In many developing countries, including Cameroon, resource constraints in primary schools pose serious challenges to teacher productivity and educational outcomes. Yaoundé II Sub-division, like many urban areas in Cameroon, experiences disparities in resource distribution and management practices, which may impact teacher performance and, ultimately, student achievement.

This study aims to investigate the relationship between resource management and teacher efficiency in selected primary schools within Yaoundé II Sub-division. It seeks to explore how the availability, accessibility, and proper use of educational resources contribute to or hinder teachers' ability to deliver effective instruction. By examining current practices and identifying gaps, the study intends to provide insights that can inform policy decisions and strategic planning to enhance both resource utilization and teacher effectiveness in the local educational context.

This chapter presents the background of the study, statement of the research problem, purpose of the research, objectives of the study, research questions, scope of the study, significant of the study, hypotheses of the study, and definition of key terms.

Background of the Study

Education is one of the most significant pillars of national development and teachers play a vital role in shaping the future of children. However, the effectiveness of teaching often depends on the availability and optimal utilization of resources. In developing countries like Cameroon, resource management in schools play a critical role in enhancing the efficiency of teaching and learning.

Teacher efficiency refers to the ability of educators to maximize student learning within the available resources and within the framework of their professional duties.

Resource management and teacher efficiency are critical components of educational success, particularly in primary schools where foundational skills and knowledge are established. In Yaounde II subdivision of Cameroon, the interplay between effective resource allocation and the performance of educators plays a pivotal role in shaping student outcomes. As urbanization and population growth place increasing demands on educational institutions, understanding how resources are managed and how teachers can maximize their effectiveness becomes essential for fostering a conducive learning environment.

This study aims to explore the current state of resource management in selected primary schools within the Yaounde II subdivision, focusing on various aspects such as financial resources, human resources, infrastructure, information resources, material resources and time resources. Additionally, it will examine the correlation between these resources and Teachers' efficiency in delivering quality education.

By analyzing the practices employed in these schools, this research seeks to identify best practices and challenges faced by educators and administrators. The findings will contribute to a deeper understanding of how strategic resource management can enhance teaching effectiveness, ultimately leading to improved student achievement. Understanding the link between resource management and teacher efficiency is crucial for addressing challenges in the educational system and improving overall educational quality.

Through this exploration, valuable insight will be provided for policy makers, school administrators and educators, striving to optimize resources and elevate educational standards in the Yaoundé II subdivision.

Historical Background

The Yaoundé II subdivision, located in Cameroon political capital, has witnessed significant changes in its educational landscape over the past few decades. Historically, education in Cameroon has been influenced by various factors including colonial legacies, economic conditions and sociocultural dynamics. During the colonial period, education was primarily a privilege for the elite with limited access for the majority of the population. Schools were often under-resourced, focusing on basic literacy and vocational skills. After independence in 1960s the government aimed to expand access to education leading to the establishment of more primary schools, particularly in urban areas like Yaoundé.

In the years following independence, the Cameroonian government implement policies aimed at increasing enrolment rates and improving educational qualify. The introduction of universal primary Educational (UPE) in the 2000s further accelerated this trend, with a focus on ensuring that every child had access to basic education. Teachers play a crucial role in the educational

process, however, their efficiency has often been compromised by the aforementioned resources constraints professional development opportunities have been limited, impacting Teachers' pedagogical skills and their ability to adapt to diverse student needs. This has led to a growing recognition of the importance of investing in teacher training and support systems as a means of enhancing educational outcomes. This is backed by the policy on sustainable development goal number 4 and 12 since quality education drop since 2015 of which Cameroon is a signatory. SDG4 focuses on quality education, ensuring inclusive and equitable quality education lifelong opportunities for all. SDG12, about capacity building: training educators and community leaders in resource management techniques.

In recent years, there has been a converted effort by both governmental and non- governmental organizations to address these challenges. Initiatives aimed at improving resource allocation such as targeted funding for underperforming schools and partnership with local communities have emerged. Additionally, there is a growing emphasis on data-driven decision making in resource management, enabling schools to identify needs and resources more effectively. Understanding this, in Yaounde II subdivision, provide valuable insight into the current challenges and opportunities within primary education

Contextual Background

Education in Cameroon is legally and institutionally recognized as a fundamental pillar for national development. This is reflected in Law No. 98/004 of 14 April 1998, laying down the orientation of education in Cameroon, which defines education as a national priority aimed at promoting social integration, economic progress, and cultural development. The law further emphasizes principles of equity, quality, and efficiency in the delivery of educational services across all regions of the country. Within this legal and policy context, the Yaoundé II Subdivision, located in the Centre Region and part of the Mfoundi Division, presents a unique urban educational landscape characterized by a mix of public, denominational, and private schools. However, despite its urban setting and proximity to administrative institutions, schools within Yaoundé II continue to grapple with issues related to resource management and teacher efficiency. According to Article 4 of the Law of Orientation, the Cameroonian government is committed to ensuring access to quality education for all, through the rational management of educational resources. Article 37 further outlines the importance of recruiting qualified teaching staff, providing professional development, and fostering motivation through adequate working conditions and incentives. However, implementation gaps remain evident, particularly at the local level. In the Yaoundé II Subdivision, recurrent challenges include overcrowded classrooms, inadequate teaching materials, poor maintenance of school infrastructure, and

limited budgetary autonomy for school administrators. These factors have a direct impact on teacher performance, morale, and effectiveness in instructional delivery. Moreover, decentralized education governance, as provided under Law No. 2004/017 of 22 July 2004 on decentralization, has not been fully operationalized in practice. Local councils often lack the financial and human resources needed to fulfil their educational responsibilities effectively. Studies (Tambo, 2003; Ndongko & Tambo, 2000) show that effective resource management is crucial for improving teacher efficiency. When resources—be they human, material, or financial—are well planned, equitably distributed, and efficiently utilized, teacher performance tends to improve significantly. This includes teacher motivation, lesson preparation, student engagement, and overall instructional quality. Given these realities, this research seeks to examine the relationship between resource management and teacher efficiency in the Yaoundé II Subdivision. It will assess how available educational resources are managed and the extent to which this management impacts the effectiveness and motivation of teachers. The study is situated within the framework of the Law of Orientation of Education in Cameroon and the National Education Sector Strategy (NESS), which together underscore the importance of efficient school governance, teacher development, and resource allocation.

Statement of the Research Problem

Despite the existence of a robust legal and institutional framework governing education in Cameroon, including laws on education, decentralization, and public financial management, the effectiveness of these provisions remains limited in practice—particularly at the local level. The Yaoundé II Subdivision, like many urban districts in the country, continues to face persistent challenges in managing educational resources in ways that promote teacher efficiency and improved learning outcomes.

The Law No. 98/004 of 14 April 1998 laying down the orientation of education in Cameroon, clearly states in Article 4 that education is a “national priority,” and in Article 37, it emphasizes the need for well-trained, motivated, and efficiently deployed teaching staff. It also calls for adequate provision and management of infrastructure, instructional materials, and support mechanisms. However, in Yaoundé II, many public and even private schools still operate in environments characterized by inadequate classrooms, insufficient pedagogic materials, overloaded timetables, and demotivated teachers, indicating a disconnect between policy and practice.

Moreover, the Law No. 2004/017 of 22 July 2004 on the orientation of decentralization grants local councils increased responsibility in managing basic education, including budgeting, infrastructure maintenance, and resource allocation. Yet, local government structures often lack

the technical capacity, autonomy, and financial resources necessary to effectively manage schools. This has led to delays in the disbursement of funds, weak oversight, and poor prioritization of school needs, directly affecting teacher morale and performance.

In addition, Cameroon's public financial management framework, guided by the Law No. 2018/011 of 11 July 2018 on the Fiscal Regime of the State and Other Public Entities, aims to promote accountability, transparency, and efficiency in the use of public funds, including those allocated to education.

Despite this, schools in Yaoundé II report frequent irregularities in budget execution, limited involvement of school heads in financial decisions, and lack of training on financial planning and reporting. Taken together, these gaps in educational governance, financial management, and resource allocation raise important concerns about the overall efficiency of teachers, who remain at the frontline of service delivery. Teachers operating under resource-constrained environments are more likely to experience burnout, absenteeism, and reduced instructional quality, which in turn undermines student performance and the broader goals of the education system. This study, therefore, seeks to investigate the impact of resource management on teacher efficiency in the Yaoundé II Subdivision, with a focus on how the laws governing education, decentralization, and financial administration are implemented at the school level. By critically analysing the alignment between legal frameworks and practical realities, the research aims to propose actionable strategies to enhance teacher efficiency through improved resource governance.

Purpose of the Study

The purpose of this study is to examine the relationship between resource management and teacher efficiency in selected primary schools in Yaounde II sub division.

Research Objectives

General Objective

To examine how resource management practices influence teachers' efficiency in primary schools.

Specific Objectives

- To examine the most prevalent resource management practices in schools as perceived by teachers.
- To determine the perceive level of teacher efficiency in schools.
- To analyse the main challenges in resource management practices in school and how teachers adapt to them.

- To determine the extent to which the dimensions of resource management practices predict teachers' efficiency.
- To examine whether the teacher's perceptions of resource management practices and teacher efficiency vary with demographic and academic factors.
- To analyse the underlying factor structures of the items measuring resource management practices and teacher efficiency.

Research Questions

General Research Question.

How do resource management practices influence teachers' efficiency in primary schools?

Specific Research Questions

- What are the most prevalent resource management practices in schools as perceived by teachers?
- What is the perceived level of teachers' efficiency in schools?
- What are the main challenges in resource management practices in schools and how do teachers adapt to them?
- To what extent do dimensions of resource management practices predict teachers' efficiency?
- Do teachers' perceptions of resource management practices and teacher efficiency vary with demographic & Academic Factors?
- What are the underlying factor structures of the items measuring resource management practices and teachers efficiency?

Research Hypothesis

General Hypothesis

Ha: Resource management practices significantly influence teacher efficiency in selected primary schools in Yaounde 2 sub Division

Ho: Resource management practices has no significant influence on teacher efficiency in selected primary schools in Yaounde 11 subdivision.

Specific Hypotheses

Specific Hypothesis (H1):

H_0: There is no dominant pattern in the resource management practices perceived by teachers in primary schools.

Ha: Certain resource management practices (e.g., resource provision, maintenance, or decentralized decision-making) are significantly more prevalent as perceived by teachers.

Specific Hypothesis (H2):

H_0: Teachers' efficiency levels are perceived to be uniformly low or moderate across the sample.

Ha: Teachers' efficiency levels, as perceived by teachers, vary significantly across key dimensions (e.g., classroom management, lesson delivery, student outcomes).

Specific Hypothesis (H3):

H_0: Teachers do not report significant challenges in resource management practices or adaptive strategies.

Ha: Teachers report significant challenges in resource management practices, and they adopt various coping strategies such as improvisation, peer collaboration, and support from PTAs.

Specific Hypothesis (H4):

H_0: Dimensions of resource management practices (e.g., provision, maintenance, training, decentralization) do not significantly predict teachers' efficiency.

Ha: Dimensions of resource management practices significantly predict teachers' efficiency, with higher resource quality and management associated with higher teacher performance.

Specific Hypothesis (H5):

H_0: Teachers' perceptions of resource management practices and efficiency do not differ significantly based on demographic or academic factors (e.g., gender, age, experience, qualification).

Ha: Teachers' perceptions of resource management practices and efficiency significantly differ according to demographic and academic characteristics.

Specific Hypothesis (H6):

H_0: There is no coherent factor structure underlying the constructs of resource management practices and teacher efficiency.

Ha: Resource management practices and teacher efficiency are represented by distinct and reliable latent constructs with statistically significant factor loadings (as identified through Exploratory and Confirmatory Factor Analysis).

Significance of the Study

The significance of this study lies in its potential to influence educational practice, policy, and research in meaningful ways. First, the findings of this research are expected to provide critical insights for policy formulation, particularly in the area of educational resource allocation within the Yaoundé II subdivision. By shedding light on the relationship between resource management and teacher efficiency, the study can guide policymakers at both local and national levels in making informed decisions that ensure equitable distribution and effective utilization

of educational resources. These insights could also serve as a reference for broader educational reforms beyond the Cameroonian context, contributing to global conversations on resource management in education.

Moreover, the research seeks to play a pivotal role in improving teaching quality. By examining how effective resource management strategies enhance teacher performance, the study aims to identify best practices that can be adopted to foster better teaching and improved student learning outcomes. The results may encourage schools to adopt more efficient management systems, invest in teacher development, and optimize the use of available resources to create a more supportive teaching and learning environment.

Finally, this study holds practical value for various educational stakeholders**,** including school administrators, government education officers, and classroom practitioners. By highlighting existing gaps in resource allocation and utilization, the research will offer evidence-based recommendations for strengthening teacher effectiveness and overall school performance. These stakeholders can leverage the study's findings to implement targeted interventions, design professional development programs, and advocate for better resource management practices, ultimately contributing to the advancement of quality education in Yaoundé II and beyond.

Scope of the Study

The study will focus on selected primary schools in Yaounde II subdivision, covering both the public and private institutions. It will examine the available resources, their management, and how they impact teacher efficiency. The geographical scope is limited to Yaounde II, and the time frame of the study will span seven months.

Definitions of Key Terms

Resource Management

Resource management in the educational context refers to the systematic and strategic allocation, utilization, and control of both tangible and intangible resources within a school setting to maximize efficiency and effectiveness in achieving educational goals. According to Bush and Bell (2002), resource management in schools encompasses not only the financial aspects but also human, material, and informational resources critical to the functioning of an educational institution. Effective resource management ensures that available inputs are judiciously allocated, properly utilized, and monitored to enhance teaching and learning outcomes. It involves key categories of resources

Financial Resources

Involves the monetary inputs that sustain school operations. These include government subventions, school fees, grants, donations, and income-generating activities. Management of financial resources, as emphasized by Okumbe (1998), covers budgeting, transparent expenditure tracking, financial accountability, and strategic financial planning to support teaching and learning effectively.

Human Resources

Are central to the educational process. They comprise teachers, school leaders (head teachers or principals), support staff (administrative personnel, librarians, custodians), and even community volunteers such as parents. The human resource dimension focuses particularly on teacher qualifications, professional experience, ongoing training, and motivation, which are recognized by Armstrong (2006) as key factors influencing school performance and teacher efficiency.

Physical Resources

Refers to the tangible assets necessary for creating a conducive learning environment. This includes infrastructure like school buildings, classrooms, and offices, as well as furniture, teaching and learning materials (textbooks, visual aids, and lab equipment), technological tools (computers, projectors, and internet access), libraries, recreational facilities, and sanitation amenities. According to UNESCO (2015), the availability and quality of physical resources significantly affect both teaching conditions and student learning outcomes.

Time Resources

Represents the allocation and management of time for various professional tasks, including classroom instruction, lesson preparation, meetings, professional development, and extracurricular activities. Effective time management, as asserted by Covey (1994), is critical for optimizing teacher productivity and achieving institutional objectives.

Information Resources

Encompass access to knowledge, data, educational research, and pedagogical best practices. These may include training manuals, curriculum guidelines, policy documents, and digital educational resources. According to Leithwood et al. (2004), access to relevant information enables informed decision-making, supports teacher professional growth, and enhances instructional quality.

Teacher Efficiency

Teacher efficiency refers to a teacher's capacity to effectively leverage their knowledge, skills, and available resources to facilitate meaningful learning experiences and achieve positive educational outcomes. It goes beyond the mere quantity of teaching hours to focus on the quality and impact of instructional delivery. As highlighted by Stronge et al. (2011), efficient teachers are those who optimize their instructional practices, manage classrooms effectively, and use available resources to maximize student engagement and learning achievements. Teacher

efficiency is thus a function of instructional competence, adaptability, and the capacity to foster a supportive learning environment.

Student Achievement

Student achievement encompasses the measurable outcomes of student learning, often assessed through performance in standardized tests, classroom assessments, and other educational benchmarks. It reflects the extent to which educational objectives have been met. According to Marzano (2003), student achievement serves as a key indicator of both teaching effectiveness and the success of educational interventions, including resource management strategies.

Classroom Management

Classroom management is the process of creating and maintaining a positive, organized, and conducive learning environment that supports student engagement and minimizes disruptive behaviors. Effective classroom management involves strategies that foster a climate of respect, order, and active participation. Evertson and Weinstein (2006) emphasize that successful classroom management is critical to maximizing instructional time and promoting student learning, thereby contributing directly to teacher efficiency and student achievement.

CHAPTER TWO
LITERATURE REVIEW

Introduction

Resource management in schools is crucial for creating an environment that fosters effective teaching and learning. In the context of primary schools in the Yaoundé II subdivision, the ability of schools to manage their resources efficiently has a direct impact on the performance of teachers and students. This chapter reviews existing literature on resource management and teacher efficiency, focusing on the factors influencing the effectiveness of teachers in primary schools in urban settings like Yaoundé II. It provides a theoretical foundation for understanding the relationship between resources and teaching outcomes, with a focus on educational institutions in Cameroon.

Conceptual Framework

According to Ogula (1998), a conceptual framework is a description of the main independent and the dependent variables of the study and the relationship that exist among them. The independent variables also known as predictor variables are the factors that the researcher thinks explains variation in the dependent variable. Kombo and Tromp (2006) defines independent variables as just causes. In this study, the independent variable is resource management and comprises human resources, financial resources, material and physical resources. If these resources are well managed, the teachers will be productive and effective in delivering lessons. On the other hand, dependent variable is teacher efficiency and in this study, its dimensions are student performance, classroom management, motivation, lesson preparation and use of alternative strategy. These conditions that appear to change as the independent variables are introduced or removed.

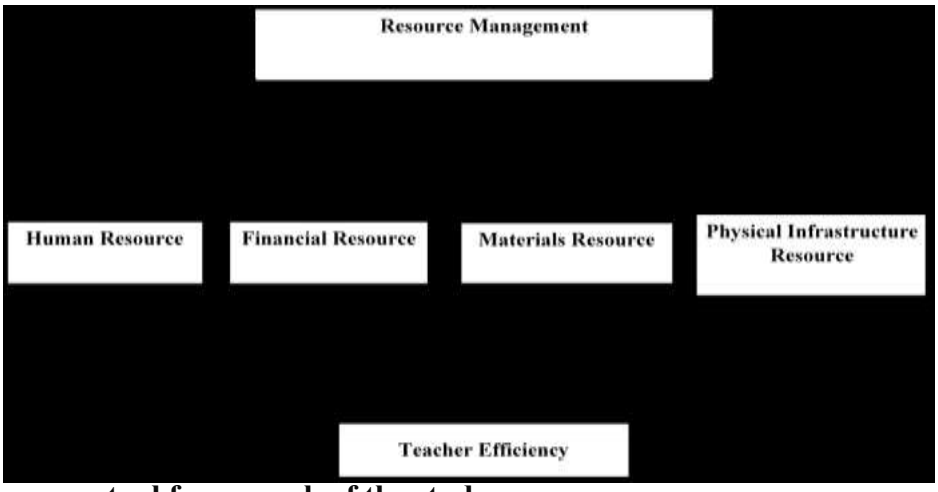

Figure 1: conceptual framework of the study

The conceptual frame work is relevant to this study because it provides administrators and teachers with some insights into skills required for them to manage resources such as human, financial, physical and material resources. The conceptual framework also implies that for accomplishment of goals, teachers need to be effective and efficient for better educational outcomes to be attained.

Theoretical Framework

The study is grounded in four interrelated theories that explain how resource management practices can influence the performance and efficiency of teachers. These include Systems Theory, Human Capital Theory, the Resource-Based View of the Organization, and Contingency Theory.

Systems Theory Ludwig Von Bertalanffy, (1968).

This theory originated in the mid-20th century as a way to understand complex systems in a holistic manner. Systems Theory conceptualizes organizations, including schools, as open systems composed of interrelated components that function together to achieve common goals. According to this theory, inputs (such as teaching materials, infrastructure, human resources, and funding) are processed to produce outputs (such as academic performance, student engagement, and teacher productivity). The quality and management of these inputs significantly affect the system's output. In an educational setting, teacher efficiency is largely influenced by the extent to which the system provides the necessary resources and support structures. When resources are poorly managed or insufficient, the school system may become inefficient, negatively impacting teacher performance and, consequently, student learning outcomes. It's relevance to the Study, Systems Theory emphasizes the importance of managing educational resources as part of a coordinated effort to maintain functional school systems and improve teacher effectiveness.

Human Capital Theory Gary Becker, (1964)

Human Capital Theory originated in the mid-20th century as a way to explain how investments in people through education, training, and health, contribute to economic growth and productivity. This theory posits that individuals and organizations derive long-term benefits from investments in education, training, and health. In the education sector, this theory highlights that improving the capacity and welfare of teachers leads to enhanced productivity, innovation, and overall institutional effectiveness. From this perspective, resource management in schools should prioritize the professional development and well-being of teachers. Allocating resources toward teacher training, fair remuneration, and a supportive work environment is essential for enhancing teacher efficiency. It's relevance to the Study in that the theory supports

the idea that strategic investment in teacher-related resources results in improved job performance and teaching outcomes.

Resource-Based View Jay Barney, (1991).

Resource-Based View (RBV) Theory originated in the 1980s and early 1990s as a way to explain how firms achieve and sustain competitive advantage by leveraging their internal resources. The Resource-Based View (RBV) of the organization argues that the internal resources of an institution if valuable, rare, difficult to imitate, and properly organized can create a sustained competitive advantage. In schools, such resources may include qualified personnel, instructional materials, advanced teaching technologies, and effective leadership. Efficient resource management ensures that these assets are used optimally to support instructional delivery. The unique configuration and utilization of such resources enhance a school's performance and give teachers the tools needed to operate more efficiently. It is relevant to the Study in the sense that Resource Based View frames resources as strategic enablers of teacher efficiency, highlighting the importance of quality and effective deployment of assets.

Contingency Theory Fiedler, (1964).

Contingency Theory originated in the 1950s and 1960s as a response to the idea that there is one best way to manage or organize a business. Contingency Theory asserts that there is no universally effective way to manage organizations; rather, effectiveness depends on the fit between internal practices and external environmental factors. Applied to education, this theory suggests that resource management strategies must align with the specific needs, challenges, and contexts of individual schools. For example, rural schools may prioritize different resources compared to urban schools, and high-enrolment institutions may require different allocation models than smaller ones. Recognizing and adapting to these contextual differences is essential for maximizing teacher efficiency.

It's relevance to the Study is that Contingency Theory supports the idea that resource management must be context-sensitive to effectively support teachers and improve performance.

Review of Related Literature

Concept of Resource Management

Resource management in education refers to the systematic planning, allocation, utilization, and monitoring of various resources — including physical, human, financial, and technological to support teaching and learning. Studies have shown that when schools implement effective

resource management practices, there is improved access to teaching materials, better classroom environments, and more efficient administrative support (e.g., Adeyemi, 2010).

Concept of Teacher Efficiency

Teacher efficiency relates to a teacher's ability to achieve desired educational outcomes using available time and resources. This includes effective lesson planning, classroom management, student engagement, and assessment practices. Researchers have noted that efficiency is enhanced when teachers have adequate support, manageable workloads, and opportunities for professional development (e.g., Darling-Hammond, 2000).

Relationship between Resource Management and Teacher Efficiency

Several empirical studies have established a positive relationship between effective resource management and teacher efficiency. For instance, schools that invest in continuous teacher training, provide adequate teaching aids, and ensure a supportive working environment tend to experience higher levels of teacher motivation and performance. Conversely, inadequate resources often lead to teacher burnout, job dissatisfaction, and reduced instructional

Resource Management and Teacher Efficiency, Globally

Selwood and Pulkingstone (2005) stipulated that the general domain regarding resources in schools has gathered enough momentum in the recent years. Globally, research studies have been carried out about the resource management. However, only little research has been done in Cameroon and has fused mainly on the resources to foster teaching and learning process. Thus, the current research seeked to propose to reduce this knowledge gap by focusing on resource management and teacher efficiency.

Merireng (2013) pinpoint that resource management in the previous years has received pint-sized attention as opposed to use resources in schools. This observation by Merireng (2013) gives this study a firm base because in Cameroon because here, resources are measured in education in terms of teaching and learning mostly and little is mentioned in terms of resource management. For this reason, the current study attempt to examine resource management and it's impact on teachers' efficiency in selected primary schools in Yaoundé 2 Sub division.

Pont et al. (2008) stated that resource utilization in schools does not happen in isolation. It takes place within the instructional contexts that may enhance or slow down effective resource allocation and resource use. This study is concerned with how resources can be effectively managed at all levels of the school system. It looks at capacity building for resource management, including the competency frame work and professional development opportunities available to support resource management capacity, the monitoring of resource use through auditing, evaluation of resource managers, transparency and accountability for the

effective use of resources. Pont et al. (2008) observation is very significant to the current research work since this work seeked to examine resource management and it's impact on teacher efficiency in the selected primary schools in Yaoundé 2 Sub division.

Asian countries show a wide disparity in resource management. In high-performing nations like Singapore and South Korea, efficient allocation of resources—including continuous professional development and classroom technology—has been closely tied to high teacher performance (OECD, 2019). Conversely, countries like India and Bangladesh still struggle with overcrowded classrooms and uneven resource distribution, leading to teacher burnout and reduced instructional quality (UNESCO, 2020). This issue relates to this research and has lead to the investigation of resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

Europe benefits from relatively equitable education systems. In Finland, for example, robust teacher training, equitable funding, and well-managed school resources correlate strongly with teacher efficiency and student outcomes (Sahlberg, 2015). The EU's investment in digital learning environments and teacher support systems has further improved efficiency, especially in countries like Estonia and the Netherlands. The study is in line with the current study because it tries to examine how head teachers and teachers of Yaounde 2 Sub division manage resources to enhance teacher efficiency and subsequently pupils academic performance

In the United States of America and Canada, research emphasizes the role of school leadership and decentralized budgeting in improving resource management and teacher effectiveness. According to Hanushek et al. (2013), schools with strong administrative systems and autonomy in resource allocation tend to see better performance among teachers. However, resource inequity remains a challenge in underfunded districts. Thus this study seeked to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

However, Tomassor (1982) carried out a study in the United States of America, Mexico, Australia, Britain and Netherlands. These countries are very much advanced in terms of managing resources. The United States and Britain are the first countries to manage resources (Mioduser et al. 2000). These findings cannot be the same or similar to developing countries like Cameroon, and particularly Yaounde 2 Sub division.

In another study conducted by Hargreaves et al. (1989) conducted a study entitled « Planning for school development; advice to governors, heads of establishment ». From the study Hargreaves et al. (1989) found out that few schools managed resources. They continue to State that in one case, visitors to the school where they managed resources well and it helped head

teachers and other administrators talk to parents about management issues of the school. The study conducted by Hargreaves et al. (1989) is in line with the current study because the study tries to examine how teachers, head teachers, administrators manage resources to enhance teacher efficiency and subsequently pupils academic performance.

The study by Hargreaves (1989) was in schools in Britain which is a developed nation which where schools do not have the same characteristics as those in Yaounde 2 Sub division of Cameroon, a developing nation. It's with this bad drop that the current study tried to examine whether or not the selected primary schools in Yaounde 2 Sub division have managed resources well to enhance teacher efficiency and then improve academic outcomes.

Latin American countries face ongoing challenges in resource management due to political instability and economic disparity. Studies from Brazil and Mexico indicate that teacher efficiency improves with better salary structures, access to learning materials, and classroom support (Vegas & Umansky, 2005). However, frequent policy changes and funding gaps hinder consistent progress. It's with this bad drop that the current study seeked to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

Resource Management and Teacher Efficiency in Africa

According to Zhao and Frank (2003) the phenomenon of resource management is relatively new in developing countries where Sub-Sahara on African countries and Cameroon in particular, constitute the majority of those countries that are lagging behind in this resource management revolution. Hence, a lot of people more especially teachers, managers and administrators are missing out on a proper and well managed resource. It's with this bad drop that the current study was undertaken in other to examine resource management and impact on teacher efficiency in selected primary schools in Yaounde 2 Sub division so that teachers mindless of the post the occupy can be well informed about school resources and ultimately, it's proper management.

In Africa, education systems face persistent challenges related to resource scarcity, which directly impacts teacher efficiency. Efficient management of human, material, and financial resources is vital to improving educational outcomes. This section explores the key themes and research findings concerning how resource management affects teacher efficiency across several African nations.

Resource Availability and Allocation

A significant issue in many African countries is the uneven distribution of resources. Oredein (2016) reports that inadequate classroom facilities, lack of instructional materials, and overcrowded classrooms hinder teacher performance in Nigerian secondary schools. Similarly,

Mulkeen (2010) found that in countries like Uganda and Malawi, inefficient deployment of teachers and teaching materials reduces instructional effectiveness. As a result of this, the study seeked to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division of Cameroon.

In Kenya, the World Bank (2018) noted that disparities in textbook distribution and teaching aids between urban and rural schools create an uneven playing field, affecting teacher morale and productivity. These disparities are often exacerbated by centralized resource management systems that are slow to respond to local needs. So it's for this reason that this study is carried out to examine resource management and its impact on teacher efficiency in selected primary schools in Yaounde 2 Sub division.

The adequacy of material resources determines the success or failure of educational system. A method to determine the extent of teacher efficiency is through student-teacher ratio which entails the number of students assigned to teachers for teaching. Student teacher ratio is used to determine the number of pupils that are allocated to a teacher in one class. It shows the teachers' workload in each class. It can be used to determine whether teachers are over utilized or under-utilized Afolobi, (2005). It's with this bad drop that the current study seeked to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

Few schools provide libraries and reading corners to enable literate environment. A school should adequately utilize the available facilities to advance learning opportunities given to pupils. It is the responsibility of the head teacher to ensure that is an adequate classroom space to enable teaching and learning process to be effective to enhance teacher efficiency. He or she has to ensure that all the facilities are efficiently and effectively utilized so as to achieve better educational goals and outcomes.

An educational institutions' human resource consist of teachers and other support staff who engage in the process of teaching and learning. There ought to be optimal use of the available human resources especially teachers for better performance to be achieved. In the context of Cameroon, there are very many trained teachers but unemployed teachers. As such, one teacher to many students in the class. As a result of this, the study seeks to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

- **Professional Development and Training**

Professional development can give rise to improvement in skills and as such be considered as a sign of a quality teacher since it reflects an ongoing effort to improve practice and to keep teachers current (Pelletier, 1995). Such practices can include participation in teacher

workshops, special training, additional college courses or advanced degrees, frequent participation in in-service meetings, as well as being a member of teacher organizations, networks, or unions. This can greatly enhance the teacher's ability to be more effective, making him or her to perform efficiently.

Teacher efficiency is also influenced by access to ongoing training and development. According to UNESCO (2020), many African teachers do not receive adequate in-service training. In Ghana, Akyeampong et al. (2013) observed that limited access to continuous professional development opportunities leaves teachers ill-equipped to adapt to curriculum changes and modern pedagogical empowerment. Thus this study seeks to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

Human resource management ensures the effective operation of an organization. It seeks to ensure that firms achieve success through their employees. The process begins with the formulation of appropriate policies for job qualifications and concludes with the promotion of business expansion. Human resource management considers that an organization's performance is enhanced through its employees (Mella, 2022). This study showed a significant correlation between human resource management and teacher efficiency, leading to school performance. Some of the best practices found in this study are planning, organizing, and managing administration; recruiting and selection; training and development; performance management; compensation and reward benefits; and health and safety. Some of the organizational performance factors included leadership, motivation, productivity, task performance, competency, satisfaction, environment and culture, and commitment and empowerment.

A solid relationship between employees and employers improves collaboration and communication. Staff involvement results in increased production, motivation, and job satisfaction. Highly engaged employees increase the performance of the organization. Van Beurden et al. (2021) stated that Dutch teachers found that available and appropriate human resources enhance teacher work engagement and job performance. So this has led to the current study that seeks to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

Moreover, when training programs are provided, they are often poorly coordinated and lack follow-up mechanisms, reducing their impact on classroom practices (Hardman et al., 2011). It's with this bad drop that the current study seeks to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

- **Infrastructure and Technology**

Infrastructure gaps remain a major impediment. A report by the African Union (2015) pointed out that many schools in sub-Saharan Africa lack electricity, clean water, and basic sanitation facilities, all of which affect teaching conditions. The lack of ICT infrastructure further limits the integration of technology in education, which is increasingly important for modern teaching. Where ICT resources are available, as in parts of South Africa, studies show improvements in lesson planning, classroom engagement, and teacher innovation (Blignaut, Els, & Howie, 2010). However, the digital divide remains wide, particularly in rural areas.

- **Teacher Motivation and Resource Management**

Effective resource management also influences teacher motivation and retention. In Ethiopia, Tessema (2011) found that poor working conditions, irregular salary payments, and lack of teaching resources were key demotivators for teachers. These conditions contribute to absenteeism, low job satisfaction, and high turnover, further weakening the education system.

On the other hand, studies from Rwanda show that strategic investments in school facilities, teaching materials, and performance-based incentives can lead to significant improvements in teacher commitment and instructional quality (World Bank, 2019).

However, in African countries, the relationship between resource management and teacher efficiency is clear and compelling. The challenges are multifaceted—ranging from insufficient materials and poor infrastructure to lack of professional development and weak administrative support. Addressing these issues through decentralized planning, equitable resource distribution, and sustained teacher support systems is essential for improving educational outcomes across the continent. As such, the study seeked to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division.

The importance of the material management process is frequently underestimated, but poor execution will have serious consequences. To appreciate the management of material resources, it is necessary to comprehend the magnitude of the head teacher's material management responsibilities. The head teacher must ensure that the right materials, in the right quantities, are delivered at the right time and place to the teacher so that he or she can deliver the best service. The fact that materials account for a huge proportion of teaching and learning activities in the school emphasizes the importance of proper material management. Materials management must be planned, procedural and includes purchasing, delivery, handling, and waste minimization with the goal of ensuring that requirements are met and it is only when the head teacher does this that the teacher is able to perform optimally and achieve the outlined goals and objectives of teaching and learning in the school. However, there are several

challenges that head teachers must deal with in the material resource management process in order to improve teachers' performance and educational goal attainment. Despite the importance of material resources in school administration, it has remained one of the most neglected areas by school administrators and this has complicated the process of school administration which has been forced to battle with the problem of shortage of material resources.

Researchers such as Ejiogu as cited in Dania et al., (2016:100) noted that "one of the problems in the Nigerian school system with regards to material resource management is not quite the non-availability or inadequate provision of good quality facilities but the inability to take good care of what is already available". This goes on to explain the fact that the lack of maintenance culture among some of these schools has worsened the material resource condition of the majority of these schools and this has made school administration a heinous task for most school administrators. These material resources which include those found within the classroom setting such as tables, chairs, charts, writing materials etc. to those outside the classroom such as classroom blocks, libraries and other essential equipment are either unavailable, inadequate, or poorly managed and this has worsened the case of most of these schools.

Izuagie (2015) conducted another study on material resources management skills needed by preschool teachers in Ondo State. The result of the study showed that material resources management skills needed by preschool teachers in Ondo State included material resource planning, material resource organizing, material resource controlling and material resource evaluation skills. The study also showed that there were no significant differences in the mean ratings of the respondents on the materials resource skills needed by preschool teachers in Ondo State. On their part, Amadi and Gbarador (2021) conducted another study on the perceived influence of the management of material resources on quality education service delivery in private secondary schools in South-West Senatorial Districts, Rivers State, Nigeria. According to the findings of the respondents, the management of material resources such as instructional and recreational resources have a significant impact on the quality of education service delivery in private secondary schools in Rivers South-West Senatorial Districts

Resource Management and Teacher Efficiency in Cameroon.

Cameroon's education sector faces considerable challenges in effectively managing resources to support teacher efficiency. The country has made strides in improving access to education, yet the quality of teaching remains compromised by insufficient infrastructure, limited teaching

materials, and gaps in teacher training. This review examines how resource management affects teacher efficiency in the Cameroonian context.

- **Resource Distribution and Infrastructure**

A key issue in Cameroon is the inequitable distribution of educational resources, particularly between urban and rural areas. According to Tambo (2003), schools in rural regions frequently lack basic infrastructure such as classrooms, furniture, and sanitation facilities, significantly hampering teachers' ability to deliver lessons effectively. The Ministry of Basic Education (MINEDUB, 2020) reported that over 40% of primary schools in rural Cameroon operate without access to electricity or running water, which reduces both teacher comfort and teaching efficiency.

Furthermore, poorly maintained infrastructure—such as dilapidated buildings and overcrowded classrooms—contributes to low teacher morale and student disengagement (Fonkeng & Ntembe, 2009).

Emmanuel Ndjebakal Soul & Genevarius Nji(2017). Investigated the effects of school facilities on internal efficiency in selected bilingual secondary schools in Yaounde Center. The study found that poor school facilities significantly affect internal efficiency, with overcrowded classrooms, inadequate desks, and damaged electrical installations being major contributors.

- **Teaching and Learning Materials**

Access to quality teaching materials remains inconsistent. Research by Ndongko and Tambo (2000) revealed that teachers often have to improvise due to shortages of textbooks, chalk, and didactic tools. The situation is worse in rural zones, where teaching aids are scarce, and even basic items like chalkboards may be unavailable or unusable. In urban centers like Yaoundé and Douala, where resources are relatively better, teachers report higher job satisfaction and improved teaching outcomes, highlighting the link between adequate resource provision and efficiency.

- **Teacher Training and Professional Development**

Teacher preparation in Cameroon has seen modest improvements, but gaps remain. According to the Cameroon Education for All (EFA) Review Report (2015), many teachers—particularly in community or "PTA schools"—have not received formal pedagogical training. This lack of training limits their ability to manage classrooms effectively or apply learner-centred teaching methods. Ngoh (2016) emphasized that while the government provides pre-service training through institutions like ENS (École Normale Supérieure), in-service professional development opportunities are infrequent and poorly coordinated. Without continuous training, teachers struggle to adapt to curriculum changes and technological advancement.

- **Governance and Resource Management**

Cameroon operates a centralized education management system, which often delays the delivery of funds and materials to schools. The World Bank (2018) reported inefficiencies in education sector budgeting and monitoring processes, resulting in misallocated resources and delayed disbursements.

Decentralization efforts have been initiated under the Growth and Employment Strategy Paper (GESP), but progress has been slow. Teachers in regions like the Far North and East continue to report shortages in basic supplies, late salary payments, and lack of administrative support (Tchombe, 2continents.

In Cameroon, resource management challenges significantly affect teacher efficiency. From infrastructure and materials to training and governance, systemic weaknesses hinder teachers' capacity to provide quality education. Addressing these issues will require better decentralization, increased investment in rural schools, regular in-service training, and more transparent resource distribution systems

A study by Mangwa (2016) on teacher performance in Cameroon highlights the importance of adequate training and continuous professional development as key factors that influence teacher efficiency. In Yaoundé II, schools that provide teachers with regular in-service training and development opportunities often report higher levels of teaching effectiveness.

Furthermore, the availability and use of instructional resources such as textbooks, technology, and teaching aids are significant contributors to teacher efficiency. Teachers in resource-rich schools tend to be more innovative and creative in their instructional methods, which can enhance student learning outcomes.

A solid relationship between employees and employers improves collaboration and communication. Staff involvement results in increased production, motivation, and job satisfaction. Highly engaged employees increase the performance of the organization. Van Beurden et al. (2021) stated that Dutch teachers found that available and appropriate human resource practices enhance teacher work engagement and job performance.

Resource Management and Teacher Efficiency in Yaounde 2 Sub Division.

Yaoundé II Sub-division, located in the Centre Region of Cameroon, includes both urban and peri-urban communities and hosts a mixture of public, private, and confessional schools. Despite its proximity to national administrative institutions, schools in this area still face challenges related to the effective management of resources, which directly influences teacher performance and efficiency. This review synthesizes existing local research and contextual data to explore how resource-related issues affect teacher efficiency in this specific area.

- **School Infrastructure and Working Conditions**

In Yaoundé II, disparities exist between schools located in central urban zones (like Melen and Biyem-Assi) and those on the periphery (such as Mballa II and Etoug-Ebe). According to Ngwa (2020), while some schools benefit from relatively modern buildings and facilities, others suffer from overcrowded classrooms, deteriorating structures, and insufficient seating capacity. These conditions create stress and reduce teachers' ability to manage classrooms effectively, especially when teacher-to-student ratios exceed 1:60. A local education inspector's report (Inspection d'Arrondissement de l'Éducation de Base, 2021) revealed that schools in poorer parts of Yaoundé II struggle with delayed government subventions, which limits the ability of school heads to carry out maintenance and provide basic teaching materials.

- **Access to Teaching Materials and ICT**

Although urban proximity has increased the availability of textbooks and internet access in central Yaoundé II schools, distribution remains uneven. In a study by Tchoumbou (2021), teachers in public schools reported that available teaching materials were often outdated or shared among multiple classes, affecting lesson preparation and delivery. Some schools rely heavily on Parent-Teacher Associations (PTAs) to procure textbooks, projectors, and printers, which favours wealthier neighbourhoods and further widens the resource gap.

Moreover, despite the push for digital integration under Cameroon's Education Sector Strategy, many teachers in Yaoundé II lack adequate ICT training. A needs assessment conducted by MINEDUB (2020) found that fewer than 35% of teachers in this sub-division were confident using digital tools in their teaching.

- **Teacher Training and Professional Development**

While teachers in Yaoundé II are generally better trained than in more rural areas, ongoing professional development is inconsistent. As noted by Mbella (2019), in-service training workshops are often organized on short notice, with limited funding and poor coordination. Teachers expressed concern over the lack of follow-up support after these sessions, making it difficult to apply new pedagogical strategies.

Blaise Fossimock et al. (2023). Examined the impact of professional development on internal efficiency in primary schools in Nyong and Mfoumou Division. The study found that poor professional development significantly impedes internal efficiency. Regular in-service training and support for teachers are essential for improving teaching quality.

Furthermore, community or "contract" teachers working under PTA arrangements in public schools often do not benefit from these training opportunities, despite handling full teaching loads. This contributes to varying levels of competence and classroom management skills within the same institutions. Vivian Ekwen et al. (2018). Investigated the relationship between

human resource management and school effectiveness in schools and found that a significant positive relationship, emphasizing the importance of effective human resource management.

- **Administrative and Financial Resource Management**

In secondary schools, the principal is often held accountable for the use and management of school finances since he is the overseer of the entire activities of the school. As a result, principals should be well-versed in financial management policies and practices as well as tools that will assist them or her achieve meaningful use of the funds under their leadership in the school. Principals are often cautioned against succumbing to the temptation of embezzling school funds as well as misusing or mismanaging school funds, as this not only impedes school progress but may also result in unfavourable consequences for the school head and the school in general and the process of financial management in the school starts and ends with the principal as the head of the school. Principals are expected to lead by example by strengthening rules guiding financial management in the school and ensuring that there is compliance with rules and regulations governing financial management policies and principles in the school by everyone in the school. Prudent financial management ensures that funds are available for purchasing teaching materials and promoting educational goals. Effective financial management is essential for making full use of available resources, which leads to the successful achievement of organizational goals. It is this kind of financial measure that ensures that funds are available for meeting any need that can help improve on the job performance of the teacher. Several schools have failed to meet their short- and long-term goals as a result of a lack of effective and efficient financial management practices which is also traceable to lapses from the heads in terms of how school funds were used. School principals must show professional competencies and integrity in financial issues in order to perform their duties and also assist teachers perform well. However, there are a host of challenges that often make this effort difficult for several principals.

School heads and local education administrators in Yaoundé II face bureaucratic delays in accessing government funding and materials. According to Ndifor (2022), budget disbursements are frequently delayed by several months, forcing school heads to rely on PTA contributions or improvised fundraising. This financial instability hinders the timely purchase of instructional materials and affects morale among both staff and students. This is the reason why the current research seek to examine resource management and its impact on teacher efficiency in selected primary schools in Yaounde 2 Sub division.

Additionally, weak monitoring mechanisms make it difficult to evaluate how effectively schools manage the resources they receive. A local audit report by the Sub-Divisional Delegation for Education (2021) cited cases of poor recordkeeping and non-transparent financial practices in several schools. In Yaoundé II Sub-division, teacher efficiency is closely tied to the quality of resource management within schools. While proximity to urban centres provides some advantages in terms of access and policy exposure, systemic issues such as unequal resource distribution, weak infrastructure, and inconsistent professional development continue to undermine teacher performance. Strengthening decentralized planning, improving funding timelines, and enhancing teacher support mechanisms are essential to improving outcomes in the sub-division.

Resource Management in Primary Schools in Yaoundé II

In Yaoundé II, primary schools face a number of challenges in managing resources effectively. These challenges include limited government funding, inadequate infrastructure, and insufficient teaching materials. The population of students in urban areas like Yaoundé has been steadily increasing, putting more pressure on schools to accommodate larger class sizes and ensure that every student has access to learning materials. Research conducted by Tabi (2019) in the Yaoundé II subdivision revealed that many schools struggle with insufficient textbooks and outdated educational technology. Despite these challenges, some schools have developed innovative strategies to maximize the use of available resources. For example, community involvement in resource mobilization has become a critical strategy in many schools, where parents and local organizations contribute to the acquisition of learning materials. Additionally, schools have increasingly turned to online platforms and mobile applications to supplement traditional teaching methods, especially in subjects such as mathematics and science.

The Importance of Resource Management in Primary Schools in Yaoundé II Subdivision

The effectiveness of any educational system relies heavily on the prudent management of resources. In Cameroon, and particularly in Yaoundé II Subdivision, primary schools often face numerous challenges, including overcrowding, inadequate infrastructure, and limited funding. In such a context, efficient resource management becomes essential for the delivery of quality education. This essay explores the importance of resource management in primary schools in Yaoundé II Subdivision, emphasizing its role in improving educational outcomes, promoting equity, and fostering sustainable development within the education sector.

Optimal Use of Limited Resources

Primary schools in Yaoundé II, like many across the country, operate with constrained financial and material resources. Effective management ensures that these limited resources are used

judiciously. By prioritizing expenditures, school administrators can allocate budgets efficiently, reduce wastage, and direct resources toward essential teaching and learning needs. For instance, the appropriate distribution of textbooks, teaching aids, and classroom materials ensures that both teachers and pupils have the tools they need to succeed, despite financial constraints.

Improved Teaching and Learning Environment

A well-managed school environment directly impacts the quality of teaching and learning. Proper resource management ensures the availability of teaching materials, aids in lesson preparation, and facilitates classroom organization. Teachers are better equipped to deliver lessons when they have access to the necessary resources, which in turn enhances student engagement and academic performance. Furthermore, schools that maintain a clean, safe, and organized environment promote a positive atmosphere that is conducive to learning.

- **Efficient Human Resource Management**

Human resources are among the most critical assets in any school setting. In Yaoundé II, where the teacher-to-student ratio can be high, managing human resources efficiently is vital. This includes fair workload distribution, continuous professional development, and performance evaluation. When teachers are supported, motivated, and held accountable, their productivity increases, leading to better educational outcomes for learners.

- **Infrastructure Maintenance and Development**

Another key aspect of resource management is the upkeep and development of school infrastructure. Proper planning and budgeting allow schools to maintain classrooms, sanitation facilities, libraries, and playgrounds. In many parts of Yaoundé II, where infrastructure can be lacking or deteriorating, good resource management ensures that available funds are used for necessary repairs and expansions. This not only improves the school environment but also contributes to the safety and comfort of students and staff.

- **Financial Transparency and Sustainability**

Transparent and accountable use of financial resources is crucial in gaining the trust of stakeholders, including parents, government bodies, and non-governmental organizations. Schools that demonstrate effective financial management are more likely to receive continued support and funding. Moreover, sustainability in resource planning allows schools to set long-term goals, such as upgrading facilities, purchasing technology, or implementing feeding programs, which can have a lasting impact on educational outcomes.

- **Enhancing Community Participation**

In Yaoundé II, community involvement plays a significant role in school development. When resources are well managed, communities are more willing to participate in school activities and contribute both materially and financially. Effective management fosters transparency and

accountability, encouraging greater parental engagement through Parent-Teacher Associations (PTAs) and other community initiatives. This collaboration strengthens the school's ability to meet its goals and respond to the needs of its students.

- **Promoting Equity and Access**

Resource management also plays a critical role in ensuring that all learners, regardless of background, have access to quality education. By prioritizing the needs of vulnerable and marginalized students, such as through the provision of school supplies or scholarships, schools can promote inclusivity and social equity. This is particularly important in diverse communities within Yaoundé II, where socioeconomic disparities can affect school attendance and performance.

- **Alignment with National Education Policies**

Finally, effective resource management ensures that schools are aligned with national and regional educational policies, such as Cameroon's Education Sector Strategy and decentralization reforms. These policies emphasize school autonomy, accountability, and results-based management, all of which require sound planning and utilization of resources. Schools that adopt best practices in resource management are better positioned to meet government targets and benefit from additional support.

The Role of School Leadership in Resource Management and Teacher Efficiency

The role of school leadership in resource management cannot be overemphasized. School heads are responsible for overseeing the distribution and utilization of resources and ensuring that teachers are supported in their roles. Effective leadership is associated with a clear vision, effective communication, and the ability to prioritize resources according to the needs of the school.

In a study by Ndongo (2020) on leadership in primary schools in Yaoundé, it was found that schools with strong leadership were more successful in securing additional resources and ensuring that teachers were well-equipped to deliver quality education. Principals who actively engaged with teachers and the wider school community were able to foster an environment of collaboration and resource-sharing, which enhanced teacher efficiency and student outcomes. Ngeh Valerie Shalanyuy & Shaibou Abdoulai Haji (2024) examined the effects of head teachers' administrative practices on teachers' job performance in Yaounde 2 Sub division. The study found that effective administrative practices positively influence teachers' job performance, highlighting the importance of leadership in enhancing teacher efficiency. It's for this reason that this study seeks to examine resource management and teacher efficiency in selected primary schools in Yaounde 2 Sub division

The Impact of Resource Management on Teacher Efficiency

The relationship between resource management and teacher efficiency is complex and multifaceted. According to a report by the Cameroon Ministry of Education (2018), schools with well-managed resources tend to have higher levels of teacher motivation and job satisfaction. Teachers who have access to up-to-date teaching materials, a conducive learning environment, and adequate professional development opportunities are more likely to be effective in their teaching. Conversely, inadequate resource management can lead to teacher burnout, frustration, and decreased efficiency. In many schools in Yaoundé II, the lack of resources such as instructional materials, proper classroom facilities, and sufficient personnel has led to overworked teachers who are unable to fully engage with students. This has been found to contribute to higher turnover rates and a decline in overall teaching effectiveness.

Case Studies of Resource Management in Selected Primary Schools in Yaoundé II

Several case studies of schools in Yaoundé II offer valuable insights into how resource management practices influence teacher efficiency. In one school, a concerted effort by the administration to improve the resource allocation system resulted in better-managed classrooms, increased teacher satisfaction, and improved academic performance among students. By leveraging community resources, the school was able to provide textbooks and teaching aids, which in turn helped teachers develop more interactive and engaging lesson plans. In contrast, a neighbouring school that struggled with resource allocation faced difficulties in maintaining a conducive teaching environment. Teachers in this school reported feeling unsupported due to the lack of essential resources, which in turn affected their teaching efficiency. Among other things, the research will seek to examine and comprehend resource management training of school heads and teachers in Yaounde 2 Sub division that they have under gone training in resource management.

Despite a growing body of research on educational resource management, significant gaps remain in understanding its relationship with teacher efficiency. Much of the existing literature is geographically skewed, focusing primarily on developed countries while overlooking low-resource settings, particularly in rural or underfunded regions. Moreover, studies tend to emphasize material and financial resources, often neglecting intangible but crucial factors such as time allocation, administrative support, and teacher well-being. There is also a notable absence of research on the management and integration of digital resources, which are increasingly relevant in modern classrooms. A further limitation lies in the top-down nature of most studies, which focus on policy-level decisions without adequately incorporating teachers' voices or agency in resource utilization. Additionally, the concept of teacher efficiency is often

narrowly defined, typically linked to student academic performance, and lacks a broader consideration of qualitative aspects such as motivation, innovation, and classroom management. Many studies also focus on short-term outcomes, failing to assess the long-term impacts of resource investment on teacher development. Lastly, there is limited interdisciplinary research combining perspectives from education, economics, and organizational psychology to offer a more holistic understanding of how resources affect teacher performance. These gaps highlight the need for more context-sensitive, teacher-centred, and multidimensional research approaches in this field.

This chapter has examined the key factors related to resource management and teacher efficiency in primary schools in Yaoundé II. Effective resource management is integral to enhancing teacher performance, which in turn impacts student outcomes. School leadership, the availability of resources, and teacher motivation are among the key factors influencing teacher efficiency. The review has also highlighted that despite the challenges faced by schools in the Yaoundé II subdivision, there are examples of innovative practices that can help schools overcome resource limitations and improve teaching and learning. Further research is needed to explore the specific resource management strategies employed in different schools and their impact on teacher effectiveness in the region.

CHAPTER THREE
RESEARCH METHODOLOGY

Introduction

This chapter meticulously details the methodological framework underpinning this investigation into the relationship between resource management and teacher efficiency in selected primary schools within the Yaoundé II subdivision. It encompasses the chosen research design, the study population, the sampling procedures, the instruments and methods used for data collection, and the analytical approaches employed. The overarching goal is to provide a transparent and robust account of the study's execution, thereby ensuring the reliability, validity, and trustworthiness of its findings in addressing the formulated research questions. The general research questions for this study was: How do resource management practices influence teachers' efficiency in primary schools? This was operationalised into the following specific research questions:

SRQ1. What are the most prevalent resource management practices in schools as perceived by teachers?
SRQ2. What is the perceived level of teachers' efficiency in schools?
SRQ3. What are the main challenges in resource management practices in schools and how do teachers adapt to them?
SRQ4. To what extent do dimensions of resource management practices predict teachers' efficiency?
SRQ5. Do teachers' perceptions of resource management practices and teacher efficiency vary with demographic & Academic Factors?
SRQ6. What are the underlying factor structures of the items measuring resource management practices and teachers efficiency?

Research Design

A research design serves as the overarching plan that connects conceptual research problems with pertinent research, delineating the data required, the methods for its collection and analysis, and ultimately, how these elements will address the research questions[1]. As posited by Kombo and Tromp (2006:7), "A research design can be seen as the structure of research," acting as a blueprint to guide the researcher through the processes of collecting, analysing, and interpreting data.

This study adopted a cross-sectional explanatory sequential mixed-methods design. This comprehensive approach was purposefully selected to provide a holistic understanding of the intricate relationship between resource management and teacher efficiency. The *"mixed-methods"* component involves the integration of both quantitative and qualitative data. The *"explanatory sequential"* aspect dictates that quantitative data was collected and analysed first, establishing a broad understanding of the phenomena and identifying key relationships. This initial quantitative phase was then followed by the collection and analysis of qualitative data, which served to explain, elaborate on, and contextualize the quantitative findings, particularly those related to perceptions of resource management and efficiency, and the challenges faced by teachers. The *"cross-sectional"* nature of the design implies that data was collected from participants at a single point in time, allowing for a snapshot of the prevailing conditions and perceptions within the selected schools.

Justification for Choice of Design

This design is particularly well-suited to answer the research questions for four main reasons:

The initial quantitative phase, using questionnaires, allows for the collection of data from a larger sample, enabling statistical analysis to identify prevalent resource management practices (SRQ1), perceived levels of teacher efficiency (SRQ2),, and the extent to which resource management practices predict teacher efficiency (SRQ4). It also helps in identifying common challenges faced by teachers (SRQ3). Descriptive research, as noted in the study, aims to gather detailed information about a population and provides a foundation for understanding patterns and relationships.

The subsequent qualitative phase, primarily through semi-structured interviews with administrators and observations, allows for a deeper exploration of the *'why'* and *'how'* behind the quantitative findings. This is crucial for understanding the specific challenges faced by teachers in resource management (Research Question 2), the specific strategies they employ to overcome these constraints and enhance efficiency (Research Question 3), and for generating actionable recommendations for improving resource management practices (Research Question 4). The open-ended nature of interviews provides flexibility and in-depth responses.

The combination of quantitative and qualitative data collection methods (questionnaires, interviews, and observation checklist) facilitates **triangulation**, enhancing the credibility and trustworthiness of the overall findings. Comparing responses from different sources helps to corroborate findings and provide a more comprehensive and nuanced understanding of the phenomenon. The mixed-methods approach, particularly with the inclusion of advanced

statistical techniques like regression and Structural Equation Modelling (SEM) in the quantitative analysis and thematic analysis in the qualitative phase, is capable of exploring the complex predictive relationships and underlying factors relevant to resource management and teacher efficiency, which is crucial for answering Research Question 1 and 4.

Study Area

The study was strategically conducted in the Yaoundé II subdivision, situated within the Centre Region of Cameroon. This geographical area was deliberately chosen due to its dual nature as both an urban and semi-urban environment, hosting a diverse range of primary schools. The significance of this location lies in its high concentration of educational institutions, which offers a representative cross-section of the broader educational landscape within Cameroon. Crucially, primary schools in the Yaoundé II subdivision vary widely in terms of resource endowment, encompassing institutions that are well-resourced alongside those grappling with significant resource challenges.

Population of The Study & Sampling

The population of the study refers to the entire aggregate of individuals or elements that the researcher is interested in investigating or from which conclusions are to be drawn. From this defined population, a smaller, representative subset, known as a sample, is selected for the actual conduct of the study. Kasonde (2013:35) precisely defines a population as "a group of individuals, objects or items from which samples are taken for measurements". Similarly, Kombo and Tromp (2006) characterize a population as "a group of individuals, objects or items from which samples are taken for measurements".

Target Population

The target population denotes the specific group of individuals that a study aims to reach and about whom inferences will be made. Fowler (2014) defines the target population as "the entire set of units for which the survey data are to be used to make inferences". For the current study, the target population comprised all primary school teachers and administrators operating within the Yaoundé II subdivision. The study's focus on teachers is justified by their central role as key facilitators in the learning process, while administrators were included due to their indispensable function in resource allocation and management within the school system. Specifically, the study encompassed teachers from both public (government) and private primary schools to ensure a comprehensive representation of the educational ecosystem in the chosen area.

Table 1: Target Population

Number of Schools and Teachers in Yaounde II Subdivision			
Anglophone Public Schools		**Francophone Public Schools**	
Schools	Teacher	Schools	Teachers
4	40	34	219
Anglophone Private School		**Francophone Private School**	
Schools	Teachers	Schools	Teacher
98	314	57	359
Total number of Teachers			932

Resource Work 2025

Sample Size

A sample is a smaller, carefully selected subgroup derived from a larger population, intended to represent that population and facilitate drawing conclusions about it[28]. It functions as a subset of individuals, items, or data points chosen from a broader group (the population) to serve as its proxy. Mugenda and Muganda (1999) define a sample as "a smaller group or sub group obtained from the accessible population". Each member within the selected sample is referred to as a subject or participant. Crucially, this smaller group must be selected meticulously and meaningfully to ensure its representativeness of the entire population, sharing commonalities and characteristics relevant to the study. The detailed distribution of sampled schools, teachers, and head teachers is presented in Table below. The Yaoundé II Subdivision, situated in the Mfoundi Division of the Centre Region, Republic of Cameroon, comprises approximately thirty-eight (38) public primary schools and ninety-one (91) private primary schools, culminating in a total of one hundred and twenty-nine (129) primary schools. For this research, a pragmatic selection of ten (10) primary schools was made. The sample size for this study ultimately consisted of 100 participants, specifically comprising 10 head teachers (one from each of the selected primary schools) and 90 teachers. This sample size was considered sufficient to yield reliable insights into the practices of resource management and their impact on teacher efficiency within the study context.

Table 2: Sample Schools, Teachers, and Head teachers

Schools	Teachers	Head teachers
GBPS Ekoudou Gr.1	10	1
GBPS Ekoudou Gr.2	9	1
GBPS Source Madagascar Gr.1	9	1
GBPS Source Madagascar Gr.2	10	1
GSB Gafahany	7	1
Good Shapherd Petit Village Mbankolo	10	1
Dumasi Carriere	10	1
Christ Winners Cheferie Mbankolo	8	1
Rosa Park Jean Vespa	9	1
Amazing Grace Mkomkana	8	1
TOTAL	**90**	**10**

Sampling Technique

A sampling technique refers to the systematic method employed to select a subset (sample) from a larger population with the aim of ensuring that this sample is representative of the entire population. According to Kasonde (2013), a sampling technique constitutes a research plan that elucidates how respondents for the study are to be selected from the broader population. It is fundamentally the process that guides the researcher in selecting the participants, locations, or objects of study.

The study primarily utilized a stratified random sampling technique to select the participating primary schools. This involved initially dividing the total number of primary schools in Yaoundé II subdivision into two distinct strata: government (public) schools and private schools. From each of these strata, a proportionate sample of schools was then randomly selected.

Following the selection of schools, a simple random sampling technique was employed to select the individual teachers and school administrators who would participate in the study from within the chosen schools. This method ensured that every teacher and administrator within the selected schools had an equal chance of being included in the sample.

Justification for Choice of Sampling Technique

This combination of stratified random sampling at the school level and simple random sampling at the individual level was chosen for the following reasons:

Stratified random sampling ensured that both public and private primary schools were proportionately represented in the sample, which is crucial given the potential differences in resource management practices and teacher efficiency between these two types of institutions. This reduces sampling bias and enhances the generalizability of the quantitative findings to both strata. Simple random sampling within schools further ensured that the selection of teachers and administrators was unbiased, strengthening the representativeness of the individual perceptions gathered. This approach is vital for answering questions about overall perceptions (RQ1, RQ2) and group differences (RQ5).

By including both public and private schools, the sampling technique allowed for an exploration of how variations in resource management practices and teacher efficiency might differ across these distinct educational contexts, directly informing the answers to Research Questions 1 and 4, and setting the stage for analysing demographic variations (Research Question 5).

This sampling strategy is practical for a mixed-methods design, providing a quantitatively representative sample for the questionnaire phase while still allowing for the targeted selection of administrators for in-depth qualitative interviews, which is essential for understanding challenges and strategies (Research Questions 2, 3).

The resulting sample size of 90 teachers and 10 school administrators, totalling 100 participants from ten selected primary schools, was considered sufficient to provide reliable insights into the practices of resource management and teacher efficiency, underpinning the statistical power for quantitative analysis and the depth for qualitative exploration.

Operationalization of Variables

This section details how the key variables of the study—the Independent Variable (IV) of Resource Management, the Dependent Variable (DV) of Teacher Efficiency, and the Intervening Variables represented by demographic data—will be defined and measured within the context of this research. Operationalization is crucial for translating abstract concepts into measurable indicators, allowing for systematic data collection and analysis.

Independent Variable (Resource Management)

Resource management refers to the processes and practices within primary schools related to the acquisition, allocation, utilization, maintenance, and monitoring of educational resources to support teaching and learning. For the purpose of this study, resource management will be operationalized through several key dimensions, primarily measured quantitatively via the teacher questionnaire and qualitatively explored through head teacher interviews and observations.

- **Quantitative Measures (Teacher Questionnaire)**

Teachers will be asked to rate their perceptions of resource management practices using a five Likert-scale, focusing on the following sub-variables:

Availability of Resources: This includes the presence and accessibility of essential teaching and learning materials (e.g., textbooks, chalk/markers, teaching aids, laboratory equipment, computers, internet access), infrastructure (e.g., classrooms, sanitary facilities, playgrounds), and human resources (e.g., support staff, specialized teachers).

Sufficiency of Resources: Teachers' perceptions of whether the available resources are adequate in quantity and quality to meet their teaching needs and student learning requirements.

Maintenance and Condition of Resources: Teachers' views on how well school resources are maintained, their functionality, and their overall condition.

Accessibility and Utilization of Resources: The ease with which teachers can access and effectively use available resources in their daily teaching activities.

Resource Planning and Allocation: Teachers' perceptions of the transparency, fairness, and effectiveness of how resources are planned, budgeted for, and distributed within the school.

Dependent Variable (Teacher Efficiency)

Teacher efficiency refers to the effectiveness and productivity of teachers in executing their professional duties, leading to optimal learning outcomes for students. It encompasses how well teachers utilize available resources (and adapt to their scarcity) to achieve educational goals. For this study, teacher efficiency will be operationalized through indicators related to pedagogical practices, classroom management, and student engagement, primarily measured quantitatively via the teacher questionnaire and qualitatively explored through teacher and head teacher interviews.

- **Quantitative Measures (Teacher Questionnaire)**

Teachers will rate their efficiency based on their perceptions of their performance in specific areas using a Likert-scale, focusing on the following sub-variables as per Research Question 1:

Lesson Preparation

Timeliness and thoroughness in preparing lesson plans.

Ability to integrate various teaching aids and materials effectively.

Relevance of prepared lessons to curriculum objectives.

Classroom Management

Effectiveness in maintaining discipline and order in the classroom.

Ability to create a conducive learning environment.

Skills in managing student behaviour and interactions.

Student Engagement

Strategies used to actively involve students in learning activities.

Ability to motivate students and foster their participation.

Perceived level of student attentiveness and enthusiasm during lessons.

- **Qualitative Measures (Teacher & Head Teacher Interviews)**

Interviews will delve deeper into teachers' self-reported strategies for enhancing efficiency despite resource constraints (Research Question 3). Head teachers will provide perspectives on observed teacher performance and challenges faced by teachers related to resource availability, which aligns with Research Question 2 and provides context for Research Question 1.

Intervening Variables (Demographic Data of Respondents)

Demographic data refers to the socio-economic and personal characteristics of the study participants. These variables are considered "intervening" because they may influence the relationship between resource management and teacher efficiency. Analysing these variables will help answer Research Question 5: "Do teachers' perceptions of resource management practices and teacher efficiency vary with demographic & Academic factors?"

Measures (Teacher Questionnaire)

The following demographic characteristics will be collected from all teacher and administrator participants via the questionnaire:

Sex - Categorical (Male/Female). This will allow for comparisons of perceptions and efficiency between genders.

Age Range - Categorical (e.g., less than 10 years, 20-30, 31-40, 41-50, 50+ years). This helps explore potential differences in experience, adaptability, or exposure to different resource management eras.

Teaching Experience - Categorical (e.g., 0-5 years, 6-10 years, 11-15 years, and 16+ years). This allows for investigation into how years of service might correlate with perceptions of resource management and self-reported efficiency.

Highest Academic Qualification - Categorical (e.g., Diploma, Bachelor's Degree, Master's Degree, PhD). This variable will help determine if higher levels of education influence teachers' approaches to resource management or their perceived efficiency.

Type of School - Categorical (Government/Public vs. Private). This is a crucial variable for comparing resource availability and management practices, as well as teacher efficiency, across different school administrative structures.

Justification for Including Intervening Variables:

Including these demographic variables is essential because:

The impact of resource management on teacher efficiency may not be uniform across all teachers. Demographic factors can introduce variations in perceptions, experiences, and adaptive strategies. Analysing these differences provides a more nuanced understanding of the research question 5.

Identifying specific demographic groups that are more or less affected by resource management issues or exhibit different levels of efficiency can inform targeted interventions and policy development. For instance, if less experienced teachers struggle more with resource constraints, specific training or support programs could be developed.

By systematically operationalizing these variables, this study aims to collect robust data that will enable a comprehensive and insightful investigation into the relationship between resource management and teacher efficiency in primary schools in Yaoundé II, effectively addressing all stated research questions.

Data Collection Methods

The study employed a convergent approach, utilizing both quantitative and qualitative data collection methods to achieve a comprehensive understanding of the research topic. Ghosh (1992) defines data collection as "a systematic way of drawing information about objects of the target population who are represented by a sample". To systematically gather information from participants, the researcher utilized structured questionnaires for quantitative data, semi-structured interviews for qualitative depth, and an observation checklist for contextual verification. Additionally, document analysis was performed to triangulate findings and provide further insights. According to Chen et al. (2007), this multi-method approach was implemented to enhance the credibility of the research findings. These methods are elaborated upon below.

Justification for Choice of Data Collection Methods

The combination of methods ensures that the diverse nature of the research questions can be adequately addressed. Questionnaires efficiently capture perceptions from a larger sample (RQ1, RQ2, RQ5), while interviews provide rich, nuanced detail and context for underlying reasons and strategies (RQ2, RQ3, RQ4).

Structured questionnaires allow for the collection of standardized data on perceptions of resource management practices and teacher efficiency from a large number of teachers, enabling statistical analysis to identify prevalence, impact, and variations across demographic factors. This is critical for answering Research Question 1 (impact of RMP on efficiency),

Research Question 4 (predictive relationships), and Research Question 5 (demographic variations).

Semi-structured interviews with school administrators provide in-depth qualitative data. This method allows for open-ended exploration of complex issues, such as the specific challenges in resource management (Research Question 2), the strategies employed to overcome them (Research Question 3), and practical suggestions for improvement (Research Question 4). The flexibility of semi-structured interviews allows for probing deeper into administrators' roles and perceptions. The observation checklist provides objective, first-hand information about the physical infrastructure and resources available in the schools. This is crucial for comparing self-reported data with actual conditions, thereby validating responses related to resource availability and helping to understand the reality of resource management challenges (Research Question 1 & 2). The use of multiple data sources (teachers' perceptions, administrators' perspectives, observed conditions, and official documents) facilitates triangulation. This process involves comparing and cross-referencing data from different methods to confirm findings, enhance the validity and credibility of the study, and provide a more robust and comprehensive understanding of the research problem.

Instruments of Data Collection

The primary instruments employed in this study, aligning with the mixed-methods approach, were:

The questionnaire served as the main instrument for collecting quantitative data from teachers. Defined as a set of statements related to a research problem, questionnaires contain items requiring responses that contribute to hypothesis verification and research question answers. The structured questionnaire in this study included both closed-ended questions (for quantitative analysis of perceptions on resource management and its impact on efficiency) and open-ended questions, allowing respondents to articulate their views more freely. A total of one hundred and twenty (120) questionnaires were distributed, yielding one hundred (100) completed returns.

For qualitative data collection, an interview protocol guided the semi-structured interviews conducted with school administrators. As Kombo and Tromp (2006) define, an interview involves questions asked orally, enhancing the credibility and depth of understanding of the study. The protocol included a set of predetermined open-ended questions designed to explore administrators' perceptions of their roles in resource management and their support for teacher efficiency. The semi-structured nature allowed for flexibility, enabling the researcher to probe further based on interviewee responses and delve into nuanced details.

Validation and reliability of the Instrument

The rigorous validation of the research instrument, specifically the questionnaire, was crucial to ensure that it accurately measured the intended constructs. This process involved two key aspects:

Face Validity: This refers to the extent to which the questionnaire items appear, at face value, to be relevant and appropriate to the study's objectives from the perspective of the participants (teachers/administrators) who will complete it. It also pertains to the general usability and clarity of the instrument.

Content Validity: Content validity involves a systematic examination of the questionnaire's content to ascertain whether it covers a representative sample of the skills, knowledge, and attitudes intended to be measured. This process ensures that the questionnaire encompasses all major aspects of the content area under investigation and that all items directly relate to the study's objectives. To ensure robust content validity, the questionnaire was meticulously reviewed by the researcher's supervisor, an expert in the field, who examined its content to confirm that each item contributed meaningfully to the study's knowledge base and served its intended purpose.

Reliability: Reliability refers to the consistency of a measurement instrument over time. A reliable instrument is one that, if used repeatedly to measure a particular characteristic, will consistently yield the same or highly similar results, thus providing dependable findings. To ensure the reliability of the questionnaire, beyond the expert review for content validity by the supervisor, the internal consistency of the quantitative scales within the questionnaire will be assessed using

Cronbach's Alpha (alpha). A Cronbach's Alpha coefficient of greater than 0.7 will be targeted as an acceptable indicator of internal consistency, signifying that the items within each scale are consistently measuring the same underlying construct.

Pilot Test: A preliminary test, commonly known as a **pilot test** or pre-test, was systematically conducted in one of the selected schools prior to the main data collection phase. The primary objective of this pilot test was to ascertain the clarity, comprehensibility, and reliability of the questionnaire items. Furthermore, it aimed to ensure that the instrument was indeed capable of eliciting the precise type of data required to address the research questions. The insights gained from the pilot test informed any necessary refinements to the questionnaire, thereby optimizing its effectiveness for the full-scale study.

Data Collection Procedure

The data collection process adhered to a structured sequence to ensure efficiency and ethical compliance. Initially, a formal letter of authorization was secured from the Dean of the Faculty of Education at the University of Yaounde 1. This authorization was subsequently presented to the Inspector of Basic Education for the Yaoundé II Subdivision to obtain official permission to conduct the research within the selected primary schools. This step also facilitated obtaining relevant statistics on the total number of schools and teachers within the subdivision.

Once permission was granted, the researcher was permitted to proceed to the designated primary schools for data collection. Semi-structured interviews with head teachers were scheduled and conducted at each school on agreed-upon dates. To ensure accurate record-keeping, a voice recorder on a mobile phone was utilized to capture the interviews, with the researcher subsequently transcribing the recorded data. Simultaneously, structured questionnaires were distributed to both teachers and administrators in each selected school. Participants were instructed to complete and return the questionnaires on the same day. The entire data collection phase was efficiently completed within a two-week timeframe.

Data Analysis

The data collected through questionnaires and interviews were rigorously analysed using a combination of quantitative and qualitative methods, consistent with the adopted explanatory sequential mixed-methods design. This integrated approach ensured a comprehensive and nuanced understanding of the research problem.

Quantitative Data Analysis

Quantitative data, primarily derived from the structured questionnaires administered to teachers, will be analysed using statistical software such as SPSS and Jamovi. The analytical procedures will encompass:

- **Descriptive Statistics:**

To address Specific Research Question 1 (What are the most prevalent resource management practices in schools as perceived by teachers?) and Specific Research Question 2 (What is the perceived level of teachers' efficiency in schools?), descriptive statistics such as frequency, percentages, mean, mode, standard deviation, and variance will be computed. These statistics will provide a clear overview of the central tendencies and dispersion of the data related to resource management practices and teacher efficiency perceptions.

- **Inferential Statistics**

Correlation Analysis

Will be used to address the underlying relationship relevant to Specific Research Question 4 (To what extent do dimensions of resource management practices predict teachers' efficiency?), Spearman correlation will be employed. This analysis will examine the direction (positive or negative) and strength (strong, moderate, or weak) of the linear relationship between resource management practices (independent variables) and teacher efficiency (dependent variable). A significant positive correlation (e.g., $r > 0.3$, $p < .05$) would indicate that better resource management is associated with higher teacher efficiency, laying the foundational evidence for subsequent regression and Structural Equation Modelling (SEM) analyses.

Group Differences (t-tests, ANOVA, MANOVA)

To answer Specific Research Question 5 (Do teachers' perceptions of resource management practices and teacher efficiency vary with demographic & Academic factors?), various group difference tests will be utilized. These include t-tests (for comparing two groups), Analysis of Variance **(ANOVA)** (for comparing more than two groups), and Multivariate Analysis of Variance **(MANOVA)** (for comparing multiple dependent variables across groups). These tests will examine whether the perceptions of resource management or teacher efficiency significantly vary based on socio-demographic factors such as sex, age range, teaching experience, qualification, and school type. This analysis will help identify potential equity or policy gaps and inform targeted interventions for specific subgroups.

Exploratory Factor Analysis (EFA)

To address Specific Research Question 6 (What are the underlying factor structures of the items measuring resource management practices and teachers efficiency?*),* EFA will be conducted. This technique will uncover the underlying latent factor structure of the questionnaire items, revealing how items cluster into meaningful dimensions such as Resource Availability, Resource Planning & Policy, Maintenance, etc. EFA is crucial for validating the constructs being measured, reducing data dimensionality, and guiding questionnaire refinement for future use.

Confirmatory Factor Analysis (CFA)

Following EFA, **CFA** will be performed to further address Specific Research Question 6 and enhance instrument validity. While Cronbach's Alpha assesses internal consistency, CFA provides more comprehensive information on construct validity, convergent validity, and discriminant validity. CFA tests whether the factor structure identified in EFA is statistically sound and aligns with the theoretical model, providing evidence of good model fit (e.g.,

RMSEA, CFI > 0.90) for the scales. This step is essential for confidently using latent variables in SEM and strengthens the overall credibility of the study.

Linear Regression Analysis

To directly address Specific Research Question 4 (To what extent do dimensions of resource management practices predict teachers' efficiency?), linear regression analysis will be employed. This technique will predict teacher efficiency from resource management practices (either as continuous variables or as factors derived from EFA). It will estimate the size and direction of influence, quantifying how much an increase in one unit of resource quality improves teacher efficiency. Regression also allows for controlling confounding variables like gender or experience, supporting the development of evidence-based recommendations for interventions and policy.

Structural Equation Modelling (SEM)

For a more comprehensive understanding of the complex relationships and pathways between different dimensions of resource management practices and teacher efficiency, **SEM** will be considered (as outlined in SRQ4 in the Synoptic Table). SEM allows for simultaneously analysing direct and indirect effects among latent variables, providing a robust test of the theoretical model.

A summary of the significance and impact of the key inferential statistical techniques is provided in Table 2

Table 3: Summary Table: Significance & Impact

Statistic	Purpose	Impact on Study
Correlation	Measure linear relationship between IV & DV	Establishes direct association; informs model building
Group Differences	Compare variables across demographics	Identifies subgroup patterns for targeted interventions
EFA	Discover latent factors in questionnaire	Validates constructs, reduces data, improves tool design
CFA	Confirm factor structure and model fit	Ensures construct validity; supports SEM
Regression	Predict DV from IVs, control for others	Quantifies effect size; builds policy models

Source: Research Work 2025

Qualitative Data Analysis

Qualitative data, primarily derived from the semi-structured interviews with school administrators and the open-ended responses from the questionnaires, will be analysed using thematic content analysis. This qualitative approach is particularly suitable for addressing Specific Research Question 2 (What are the key resource management challenges faced by teachers in these schools?), Specific Research Question 3 (What are the specific strategies employed by teachers to overcome resource constraints and enhance their efficiency?), and providing deeper insights for Specific Research Question 4 (How can resource management practices be improved to increase teacher efficiency?). Thematic content analysis involves systematically identifying, analysing, and reporting patterns (themes) within the data[110]. The analytical process will follow these steps:

All audio-recorded interviews will be accurately transcribed verbatim.

The researcher will repeatedly read through all transcripts and qualitative notes to become thoroughly immersed in the data and gain an overall understanding of the content.

The data will be broken down into meaningful segments, and initial codes will be generated. These codes will identify basic elements of the data that appear interesting or relevant to the research questions.

Similar codes will be grouped together to form potential themes. This iterative process involves looking for patterns and significant meanings across the entire dataset.

The identified themes will be reviewed and refined to ensure they are coherent, distinct, and accurately reflect the content of the coded extracts. Sub-themes may also be developed.

Each theme will be clearly defined and given a concise, descriptive name that captures its essence.

The final qualitative findings will be presented as a narrative, richly supported by illustrative direct quotes from the participants to provide voice and evidence for the developed themes.

The insights generated from this qualitative analysis will be instrumental in explaining, contextualizing, and elaborating upon the findings from the quantitative phase. Specifically, it will provide rich, nuanced explanations for the statistical relationships observed, detail the specific challenges teachers and administrators face with resource management, articulate the innovative strategies teachers employ to navigate resource constraints, and offer actionable recommendations for improving resource management practices to enhance teacher efficiency.

Ethical Considerations

Ethical considerations were paramount throughout the entirety of this study, serving as the moral compass guiding the research and upholding the principles of professionalism. Prior to

the commencement of any data collection, formal ethical approval was rigorously sought and obtained from the relevant educational authorities within the Yaoundé II subdivision.

The following ethical principles were diligently observed to safeguard the rights and well-being of all participants:

A foundational step involved obtaining official authorization from the Dean of the Faculty of Education at the University of Yaounde 1. This institutional authorization was subsequently presented to the Inspector of Basic Education for the Yaoundé II Subdivision, securing the necessary institutional permission to conduct the research in the selected primary schools.

Central to ethical conduct, informed consent was meticulously obtained from every participant before their involvement in the study. This process ensured that participants were fully apprised of the study's purpose, the procedures involved, any potential risks or benefits associated with their participation, and their unequivocal right to withdraw from the study at any given point without incurring any negative consequences.

Participants were unequivocally assured of both confidentiality and anonymity regarding their identities and responses. Stringent measures were implemented to ensure that personal identifying information was de-linked from their responses, and that their contributions could not be traced back to them. All data collected, regardless of format, was stored securely in accordance with data protection protocols. Access to this data was strictly limited to the researcher, and it was used exclusively for the stated purpose of this study.

Limitations of the Study

Despite the comprehensive and systematic methodological approach employed, it is imperative to acknowledge certain inherent limitations of this study. One notable limitation stems from the reliance on self-reported data, which formed a significant portion of the information gathered through questionnaires and interviews. Such data, by its nature, can be susceptible to various biases, including social desirability bias (where participants may provide responses they believe are socially acceptable rather than entirely accurate) or recall bias (where participants' memories may not perfectly reconstruct past events or perceptions). While the mixed-methods design and the inclusion of observational data and document analysis were intended to mitigate these biases through triangulation, they do not entirely eliminate the potential for subjective influence.

Furthermore, due to practical constraints related to time and available resources, the scope of this study was delimited to a specific sample of primary schools exclusively within the Yaoundé II subdivision. Consequently, the findings, while providing valuable insights into this particular context, may not be fully generalizable or representative of the broader spectrum of resource management practices and teacher efficiency across all diverse regions in Cameroon.

Researchers should exercise caution when extrapolating these findings beyond the specific geographical and institutional context of this study.

Summary

This chapter has meticulously detailed the research methodology employed to investigate the relationship between resource management and teacher efficiency in primary schools within the Yaoundé II subdivision. The rationale for adopting a cross-sectional explanatory sequential mixed-methods design was thoroughly explained, emphasizing its capacity to provide both breadth and depth in understanding the research problem. The chapter also outlined the study's population, the stratified random and simple random sampling techniques, and the instruments used for data collection, including structured questionnaires, semi-structured interviews, an observation checklist, and document analysis. Furthermore, the detailed quantitative and qualitative data analysis procedures, chosen to directly address the research questions, were presented alongside the crucial ethical considerations that guided the study's conduct. Finally, the inherent limitations of the chosen methodology were acknowledged, providing a balanced perspective on the scope and generalizability of the anticipated findings. This robust methodological framework lays a solid foundation for the subsequent presentation and interpretation of the research outcomes.

Synoptic Table

General Research Question - How do resource management practices influence teachers' efficiency in primary schools?

Table 4: Synoptic Table of Research Questions, Hypotheses, Variables And Indicators

Specific research questions	Hypotheses	Analytic method	Variables	Dimension	Indicators OR ITEMS
SRQ1. What are the most prevalent resource management practices in schools as perceived by teachers?		Descriptive statistics: *Frequency, *Percentages, *Mean, *Mode, *Standard deviation, *Variance.	Independent variables = Resource management Practices (RMP)	Maintenance RMP	RMP7, RMP11
				Infrastructural RMP	RMP3
				Human RMP	RMP2, RMP12
				Financial RMP	RMP4
				Material RMP	RMP1 & RMP10
				Decision RMP	RMP6 & RMP13
				Training RMP	RMP8
				Decentralisation RMP	RMP14
SRQ2. What is the perceived level of teachers' efficiency in schools?		Descriptive statistics: *Frequency *Percentages *Mean *Mode *Standard dev. *Variance	Dependent variable = Teacher Efficiency (TE)	Student Performance,	TE3 & TE6
				Classroom Management,	TE1, TE8, & TE9
				Commitment Motivation,	TE4
				Lesson Preparation	TE7
				Use of Alternative strategy	TE5, TE10, & TE11

SRQ3. What are the main challenges in resource management practices in schools and how do teachers adapt to them?		*Thematic content analysis (qualitative ➔ quantitative) *frequency *percentages *Spearman correlation,		Challenges in Resource Management	CRM 1 to CRM7
SRQ4. To what extent do dimensions of resource management practices predict teachers' efficiency?	Resource management practices significantly predict teachers' efficiency.	*Multiple Regression *Structural Equation Mode	DV & IV		Summation of various dimensions
SRQ5. Do teachers' perceptions of resource management practices and teacher efficiency vary with demographic & Academic factors	There are statistically significant differences in perceptions of resource management practices and teacher efficiency based on teachers' demographic characteristics.	T-tests, ANOVA, MANOVA	*Sex, *Age Range, *Teaching Experience, *Qualification, *School Type?		
SRQ6. What are the underlying factor structures of the items measuring resource management practices and teachers efficiency?	* The resource management scale is composed of multiple latent factors (e.g., resource availability, policy involvement, maintenance, etc.). * The teacher efficiency scale is composed of multiple latent factors (e.g., classroom management, student outcomes)	*Exploratory Factor Analysis (EFA) – Instrument Reliability & Dimensionality *Confirmatory Factor Analysis		Measurement model	

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

Demographic Analysis of Respondent

Sex of Respondents

Table 5: Sex of Respondents

Frequencies of Sex			
Sex	**Counts**	**% of Total**	**Cumulative %**
Male	55	55.0%	55.0%
Female	45	45.0%	100.0%

Source: Research Work 2025

The bar chart below shows the results of respondents for sex. There were 55% male teachers who responded to the questions and 45% female who took part in the research. This implies that the percentage difference of male to female teachers who participated in the research is insignificant.

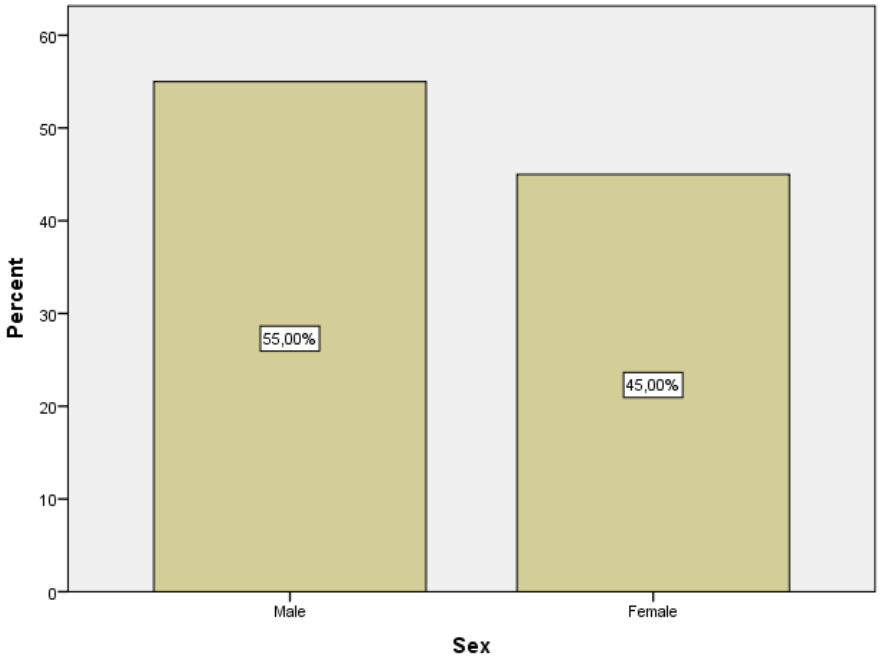

***Figure* 2 : Sex of respondents**

Age range of respondents

Table 6: Age of Respondents

Frequencies of Age			
Age	**Counts**	**% of Total**	**Cumulative %**
less than 20 years	3	3.0%	3.0%
20 - 30 years	22	22.0%	25.0%
31 - 40 years	50	50.0%	75.0%
above 40 years	25	25.0%	100.0%

Source: Research Work 2025

The chart below shows age range of the respondents. It shows that teachers with ages below 20 years registered only 3%. Teachers between 20 to 30 years registered 25%. Teacher between the ages of 31 to 40 years registered 75% which is the highest range of teachers who responded to the questions. This implies that most teachers who answered are between ages thirty-one to forty years.

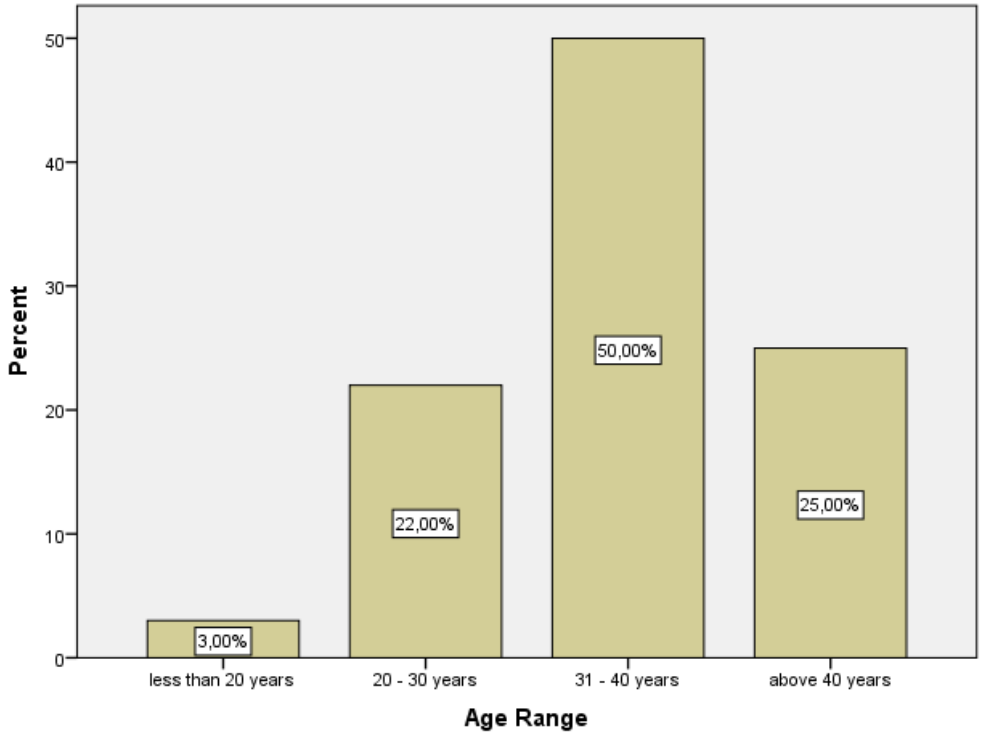

Figure 3 : Age of respondents

Teaching Experience

Table 7: Experience of respondents

Frequencies of experience			
experience	**Counts**	**% of Total**	**Cumulative %**
0 - 5years	11	11.0%	11.0%
6-10years	23	23.0%	34.0%
11 - 15 years	48	48.0%	82.0%
above 16 years	18	18.0%	100.0%

Source: Research Work 2025

The chart below indicates the teaching experience of teachers who answered the questions. It shows that zero to five years recorded the lowest level of teaching experience with a percentage of 11. The highest level of teaching experience was between 11 to 15 years, recording a percentage of 82.

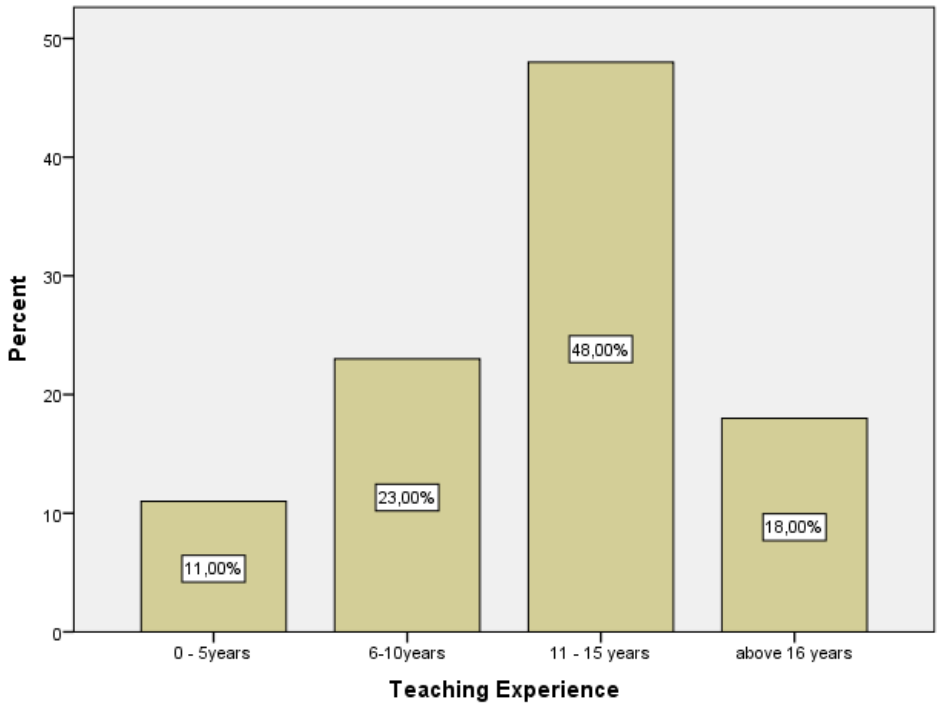

Figure 4 : Teaching experience of respondents

Qualification of respondents

Table 1: Qualification of Respondents

Frequencies of Qualification			
Qualification	**Counts**	**% of Total**	**Cumulative %**
Advanced Level	13	13.0%	13.0%
HND in Education	16	16.0%	29.0%
CAPIEMP/CAPIET	60	60.0%	89.0%
Bachelor's Degree	9	9.0%	98.0%
Master Degree	2	2.0%	100.0%

Source: Research Work 2025

The chart below shows the different levels of education of teachers who participated in the research. Master's degree had 2%, Bachelor's degree had 9%, CAPIEMP/CAPIET 60%, and have the highest number of teachers who answered the question. Advanced level zas 13%. Those with HND recorded 16%.

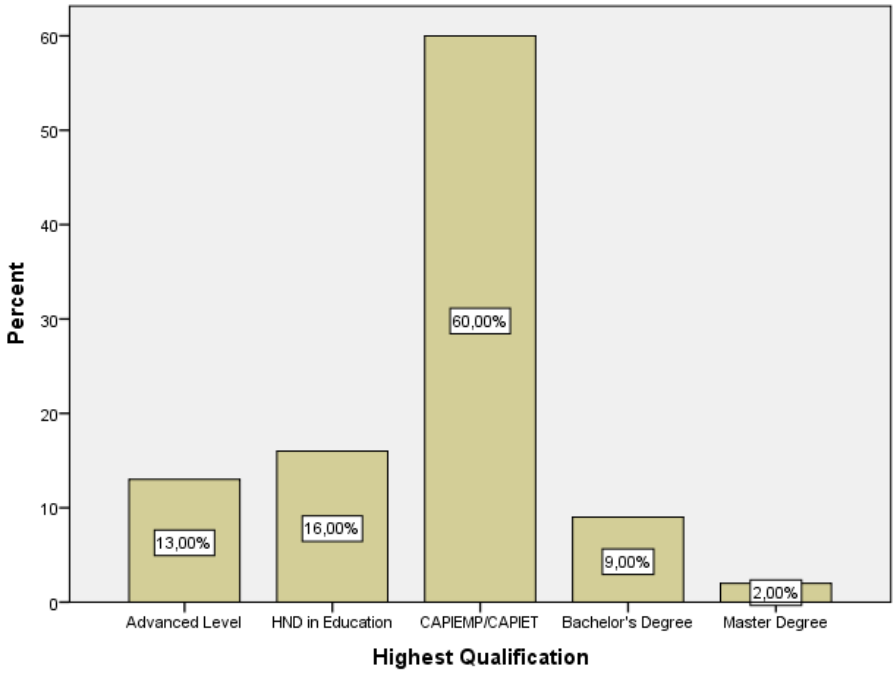

Figure 5 : Qualification of respondents

Position

Table 2:Position of Respondent

Frequencies of Position			
Position	**Counts**	**% of Total**	**Cumulative %**
Classroom Teacher	85	85.0%	85.0%
Head Teacher	13	13.0%	98.0%
Inspectors	2	2.0%	100.0%

Source: Research Work 2025

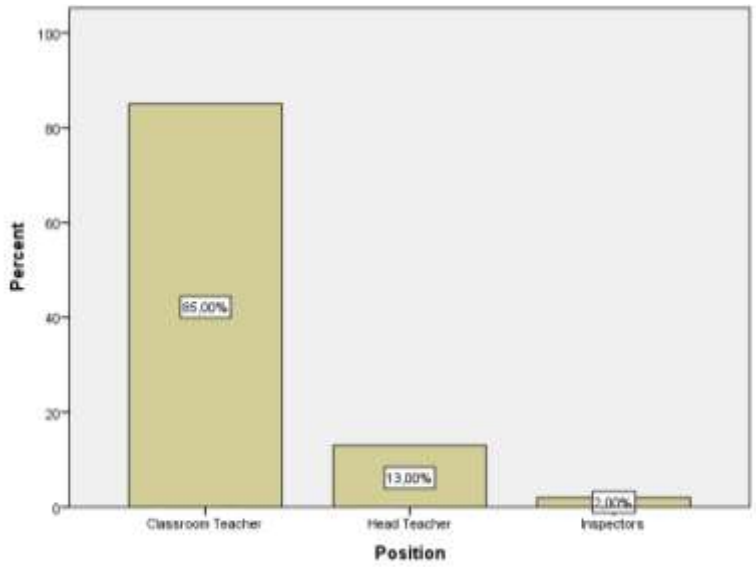

Figure 6 : Position of respondents

Type of School

Table 3: Type of School

Frequencies of School type			
School	**Counts**	**% of Total**	**Cumulative %**
Public	44	44.0%	44.0%
Lay Private	54	54.0%	98.0%
Private Bilingual	2	2.0%	100.0%

Source: Research Work 2025

The chart below shows the type of school. Public school teachers were 44, recording 44%. Lay private schools registered 54%, with the highest percentage of teachers who answered the questions.

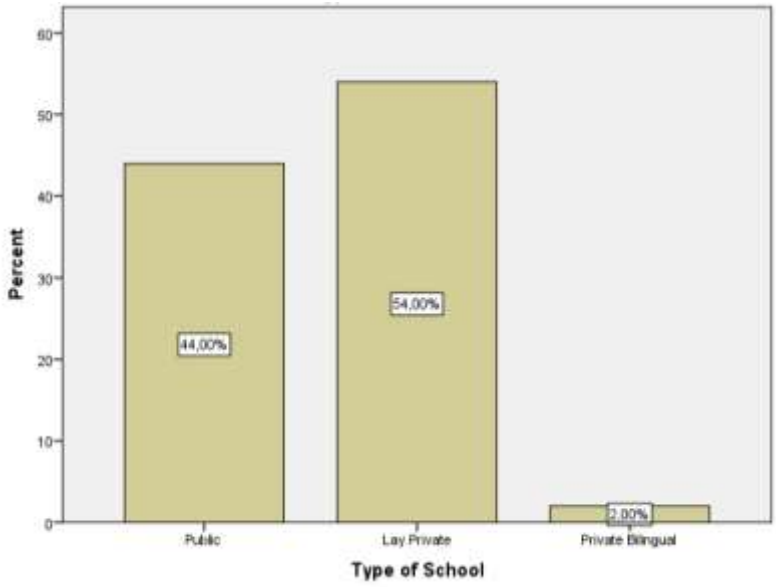

Figure 7 : Type of School

Descriptive Analysis of Variables of the Study

Resource Management Practices

Specific Research Question 1. What are the most prevalent resource management practices in schools as perceived by teachers?

As concerns the central tendency, the MODE (most frequent response) shows most items (RMP1–RMP4, RMP7–RMP14) have a mode of 4.00 indicating general agreement among respondents with the statements, while RMP5 and RMP6 have a mode of 2.00 suggesting possible concern or dissatisfaction with Policies on resource allocation being fair and transparent (RMP5) and Teachers participate in resource-related decision-making (RMP6)

From the MEAN (average response) values, we realized most mean values range from 2.49 (RMP5) to 3.93 (RMP14), items reflect slight agreement or neutrality with the items. The overall means cluster around 3.00–3.60, indicating neutral to positive responses.

RMP14 is the most positively rated, with the highest mean (3.93) indicating strong consensus or satisfaction. RMP5, RMP6 and RMP9 have the lowest means (2.49, 2.68 and 2.72) suggest some dissatisfaction or disagreement. From the mode and mean values we can conclude that items like RMP14, RMP8, RMP12 received strong agreement (high means and mode = 4), while RMP5 and RMP6 show clear disagreement (mean ≈ 2.5, mode = 2), meaning these items were less endorsed or perceived negatively.

Table 4:Resource management practice

	Mean	Mode	Standard deviation	Variance	Shapiro-Wilk W	Shapiro-Wilk p
RMP14. For better resource management in schools, decentralization system has to be adopted.	3.93	4.00	0.977	0.955	0.830	<.001
RMP8. Regular training on resource management can help you better use resources to increase student engagement.	3.60	4.00	1.36	1.84	0.801	<.001
RMP12. The school administration is primarily responsible for managing and allocating resources in your school.	3.50	4.00	1.16	1.34	0.820	<.001
RMP11. There is good maintenance of the available resources in your school.	3.34	4.00	1.28	1.64	0.827	<.001
RMP10. Limited access to ICT tool is a resource constraint common in your teaching experience.	3.29	4.00	1.37	1.86	0.836	<.001
RMP1. The school provides adequate didactic materials (textbooks, chalks, charts, etc.).	3.26	4.00	1.37	1.87	0.831	<.001
RMP7. Resources are regularly maintained and replaced when worn out.	3.18	4.00	1.27	1.60	0.862	<.001
RMP13. Teachers and administrators are involved in resource planning and decision making.	3.15	4.00	1.20	1.44	0.884	<.001
RMP3. The school infrastructure (classrooms, toilets, library, etc.) is well managed.	3.03	4.00	1.45	2.11	0.865	<.001
RMP2. The number and qualification of teaching staff are sufficient.	3.01	4.00	1.42	2.03	0.862	<.001
RMP4. Financial resources are adequately provided for educational activities.	2.98	4.00	1.33	1.76	0.878	<.001
RMP9. All the resources needed in your school are very much adequate.	2.72	4.00	1.26	1.60	0.859	<.001
RMP6. Teachers participate in resource-related decision-making.	2.68	2.00	1.23	1.51	0.875	<.001
RMP5. Policies on resource allocation are fair and transparent.	2.49	2.00	1.15	1.32	0.872	<.001

Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Source: Research Work 2025

Most items show moderate variability (S.D. between 1.2 and 1.4), suggesting some spread in responses but not extreme. RMP14 has the lowest spread (S.D. = 0.977), indicating high agreement and consistency among respondents. RMP5 and RMP6, though negatively rated, have relatively low variability, suggesting consistent disagreement among participants. Items like RMP3, RMP2 (with higher S.D. and variance) indicate a wider spread in perception.

Normality

From the Shapiro-Wilk Test, all RMPs have Shapiro-Wilk p-values < .001, indicating that none of the RMP distributions follow a normal distribution according to this test. This suggests that non-parametric tests or robust statistical methods might be more suitable for further analysis.

Cases with High disagreement (Low mean)

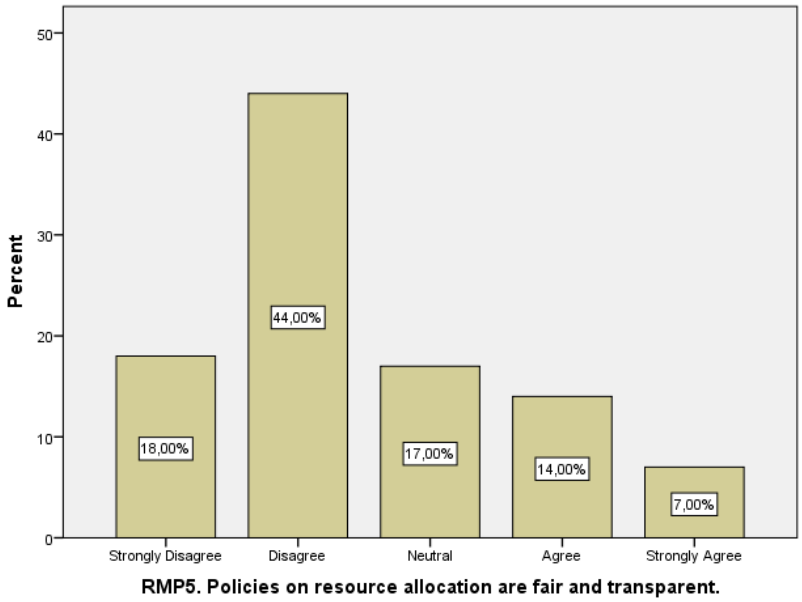

Figure 8 : Policies on research allocation

The bar chart presents responses to the statement "*RMP5. Policies on resource allocation are fair and transparent.*"

The highest percentage of respondents disagreed 44%, suggesting a widespread perception that resource allocation policies are not fair or transparent. A significant proportion strongly disagreed (18%), reinforcing the negative sentiment. A moderate number (17%) remained undecided or indifferent, possibly indicating uncertainty or lack of information. Only 21% of respondents expressed agreement, with a very small fraction strongly agreeing (7%):

A combined 62% of respondents (Strongly Disagree + Disagree) do not believe that resource allocation policies are fair and transparent. This points to a major trust or communication gap regarding these policies. Only 21% show any level of agreement, highlighting a need for improved transparency and fairness, better communication or stakeholder involvement and policy review or reform

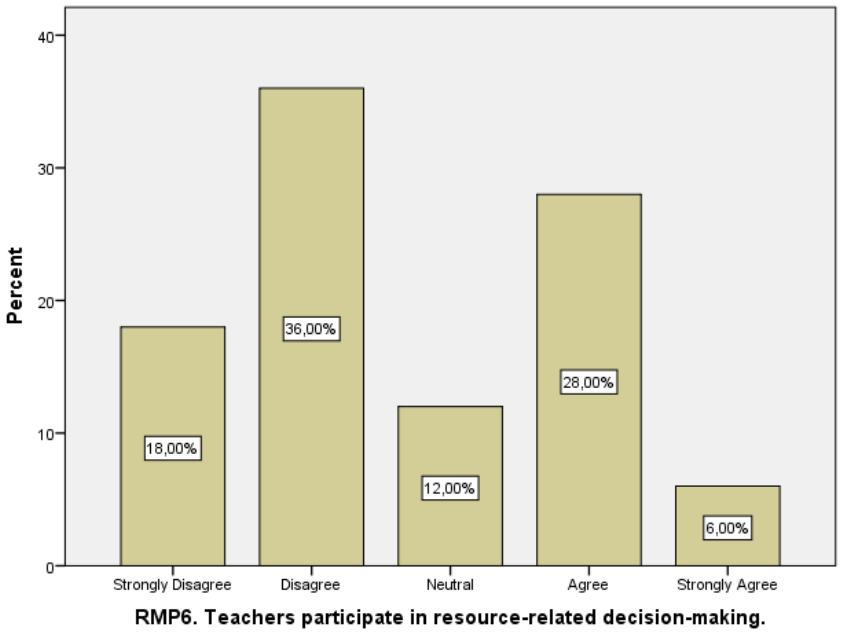

Figure 9 : Teacher participation in resource-related decision-making

A combined 44% of respondents (strongly disagree & disagree) do not agree that teachers participate in resource-related decision making. Only 34% say that teachers take part and 12% that do not know if teachers take part in decision making or not. This indicate uncertainty.

Cases with High Agreement (High Mean)

Nearly half of the respondents (46%) agree, showing strong support for decentralization in improving school resource management. A significant portion of 30% strongly supports this idea, bringing total support to 76%. 12% remain undecided, possibly due to a lack of understanding or mixed experiences with decentralization. Only 12% oppose the idea.

An overwhelming majority (76%) of respondents favour adopting a decentralization system for better resource management in schools. This suggests broad stakeholder support for decentralization, a potential opportunity for policy reform or decentralization initiatives or low opposition, indicating readiness for change at the grassroots level.

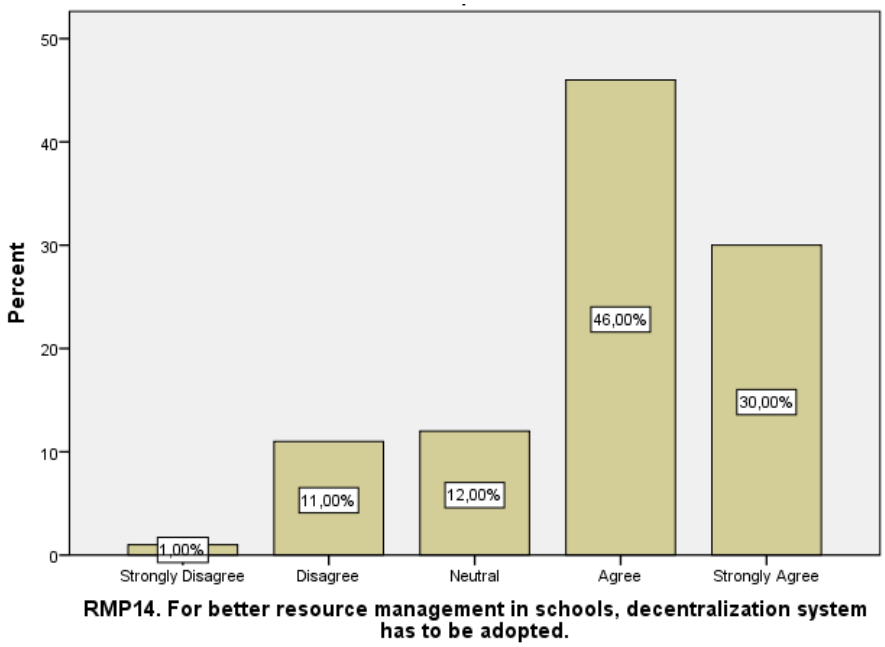

Figure 10 : Decentralization adoption system

Conclusion to SPQ1.

The most prevalent resource management practices in schools as perceived by teachers, based of decreasing order of mean values above 3 in table 9 signifying agreement are:

- Adoption of decentralisation to manage resources in school-RMP14;
- school administration is primarily responsible for managing and allocating resources-RMP8;
- good maintenance of the available resources –RMP11;
- Limited access to ICT tool is a resource constraint – RMP10;
- Adequate provision of didactic materials (textbooks, chalks, charts, etc) - RMP1;
- Regularly maintenance and replacement of worn out resources –RMP7;
- Involvement of teachers and administration in resource planning and decision making-RMP13; and
- Management of school infrastructure (classrooms, toilets, library, etc.)

We conclude that our respondents believe that adoption of decentralisation in management of resources, involvement of teachers and administrations planning and decision making in addition to maintenance and adequate provision of resources is desired in our primary schools.

Teacher's Efficiency

Specific Research Question 2. What is the perceived level of teachers' efficiency in schools?

Table 5:Teacher Efficiency

	Mean	Mode	Standard deviation	Variance	Shapiro-Wilk W	Shapiro-Wilk p
TE3. Adequate resources lead to better student academic outcomes.	4.26	4.00[a]	0.787	0.619	0.781	<.001
TE4. When resources are available, I feel more committed and motivated.	4.25	4.00	0.809	0.654	0.767	<.001
TE6. There is a strong link between resource sufficiency and my teaching effectiveness.	4.16	4.00	0.748	0.560	0.760	<.001
TE8. Availability of resources help limit time spent on managing student behaviour.	4.16	4.00	0.838	0.701	0.752	<.001
TE2. The availability of resources enhances my lesson delivery.	4.14	4.00	0.779	0.606	0.795	<.001
TE5. I adopt alternative strategies when resources are insufficient.	4.09	4.00	0.805	0.648	0.807	<.001
TE7. Much time is spent on lesson preparation when resources are insufficient.	4.08	4.00	0.895	0.802	0.764	<.001
TE1. I effectively manage my classroom despite resource limitations.	3.98	4.00	0.816	0.666	0.805	<.001
TE9. Most classroom management issues are linked to resource inadequacy	3.89	4.00	1.02	1.05	0.803	<.001
TE10. Teachers use technology to support inadequate physical resources.	3.79	4.00	0.957	0.915	0.747	<.001
TE11. I improvised teaching aids using local material can be used to cope with limited resources.	3.73	4.00	0.962	0.926	0.786	<.001

Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Source: Research Work 2025

The mean or average score for each item, indicates the central tendency of responses. Most means are above 4.00, suggesting general agreement or positive perception on these statements. The mode indicates the most frequently occurring score. For all items, the mode is 4.00, implying that "4" (likely representing "Agree" or a similar category on a Likert scale) was the most common response.

Highest agreement is noted for TE3 (Mean = 4.26) indicating adequate resources lead to better student academic outcomes, and TE4 (Mean = 4.25) - resource availability increases commitment and motivation.

Lowest agreement with items TE11 (Mean = 3.73) on Improvising of teaching aids using local materials, and TE10 (Mean = 3.79) on using technology to support inadequate physical resources.

Most items have standard deviations between 0.7 and 1.0, indicating moderate variability in responses. TE9 (SD = 1.02) and TE11 (SD = 0.962) have slightly higher variability.

The standard deviation measures the spread or variability of the data around the mean. Values range from 0.748 to 1.02, indicating a moderate level of dispersion in responses for most items. TE9 (1.02) has the highest standard deviation, suggesting more varied opinions on classroom management issues being linked to resource inadequacy. The variance is the square of the standard deviation, providing another measure of data spread. It ranges from 0.560 to 1.05. There is some variability in responses, but not extremely high, as reflected by the standard deviations.

Shapiro-Wilk p represents the p-value associated with the Shapiro-Wilk W statistic. For all items, the p-value is "<.001". This very small p-value (less than 0.05) indicates that the data for each item is not normally distributed.

Teacher's Efficiency with high mean values

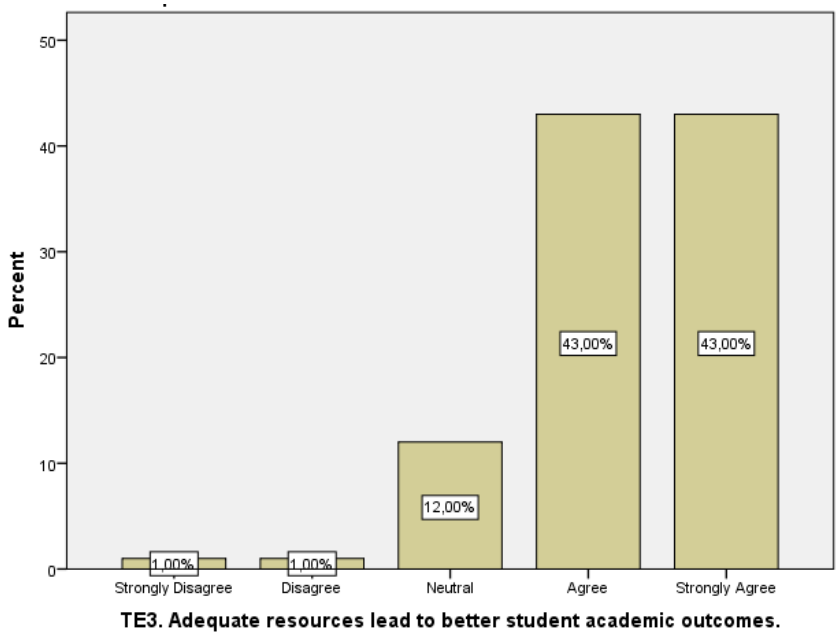

Figure 11 : Adequate resource for better outcomes

The figure above shows that 86% of the respondents strongly agree that adequate resources lead to better student academic outcomes. There is an insignificant percentage of 1% of those who see that adequate resources can lead to better outcomes, and 12% of the respondents who

remained uncertain to whether adequate resources in a school can lead to better student academic outcomes or not.

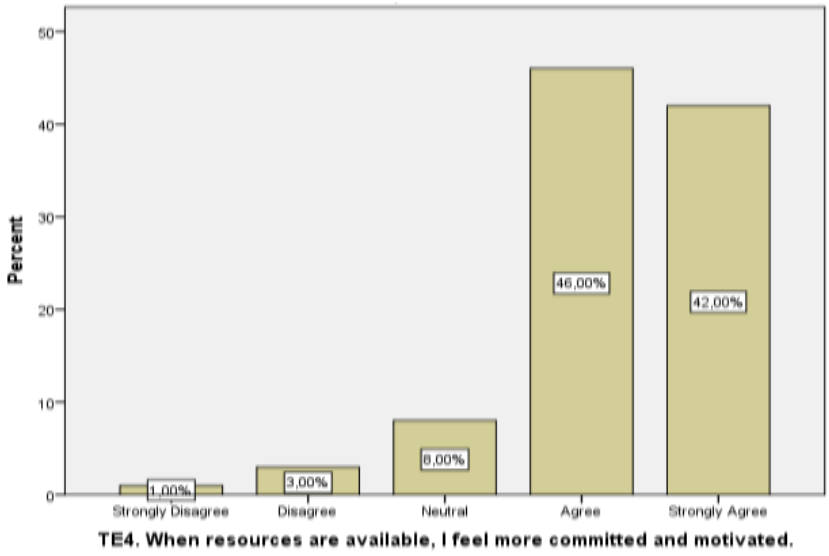

Figure 12 : Available resources

The figure above shows that 88% of respondents agree that when resources are available, they feel more committed and motivated in their job. A total of 4% disagree to this while 8% are indecisive to this point. Since a majority agree that resource availability make them committed and motivated, this will lead to effectiveness and making the teachers more efficient in carrying out duties.

Teacher's Efficiency with low mean values

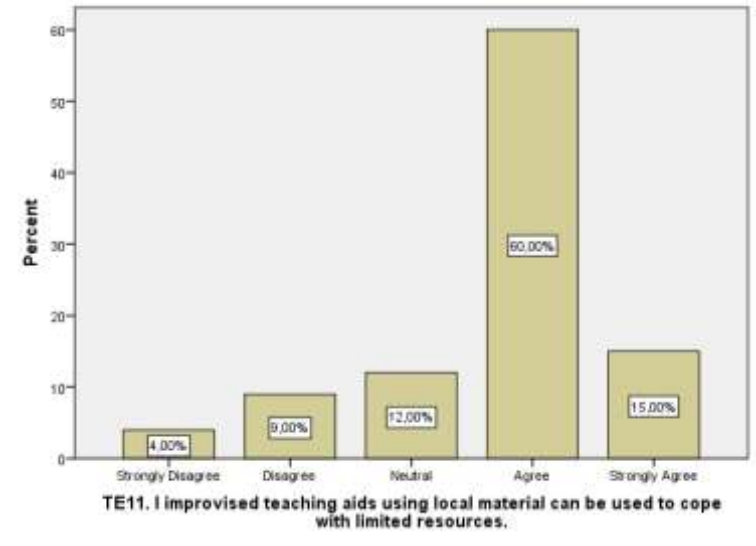

Figure 13 : Improvised teaching aids

Here, an insignificant percentage of 13% disagree that teachers need to improvise teaching aids using local materials to cope with limited resources. 75% of the respondents are for the fact that teachers can improvise teaching aids using local material to cope with limited resources. 12% of the respondents are indifferent.

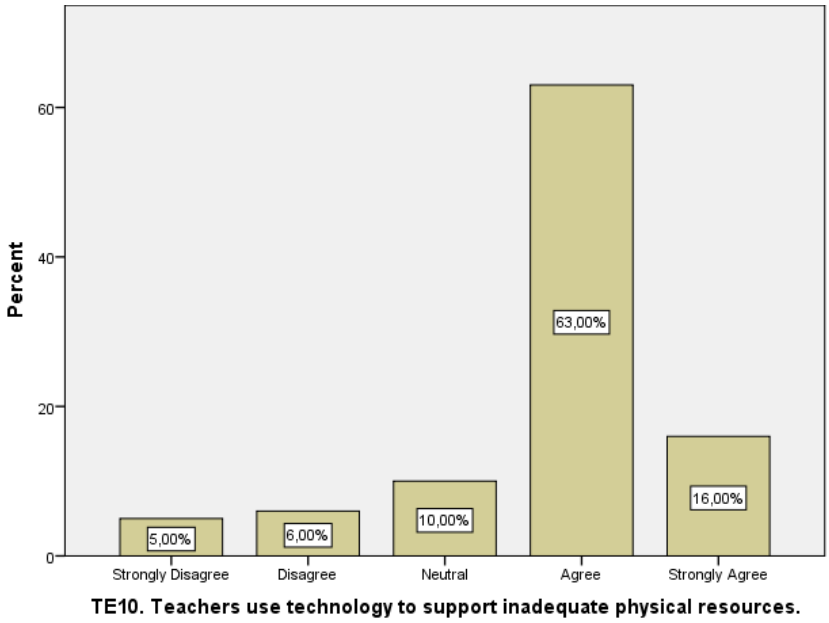

Figure 14 : Use of technology

From the figure above, a combined percentage of 79% (agree + strongly agree) that teacher use technology to support inadequate physical resources. 11% of respondents disagree to this and 10% respondent are indifferent.

Conclusion to SPQ2

We conclude by saying that high mean value > 4, obtained in table 10 shows the perceived level of teachers efficiency by our respondents namely the ideas that:

- Adequate resources lead to better student academic outcomes – TE3;
- Resource availability makes teachers more committed and motivated – TE4
- Perception of strong link between resource sufficiency and my teaching effectiveness- TE6;
- Availability of resources help limit time spent on managing student behaviour –TE8, and enhance lesson delivery – TE 2 & TE7; and
- Adoption of alternative strategies when resources are insufficient –TE5

Thus our respondents perceive resources adequacy and availability as crucial for teachers' efficiency.

Challenges in Resource Management

Specific Research Question 3. What are the main challenges in resource management practices in schools and how do teachers adapt to them?

The main challenges in resource management practices in primary schools in decreasing order of magnitude are shown on table 11 below.

Table 6:Challenges

	Mean	Standard deviation	Variance
CRM1. Insufficient didactic materials	1.20	0.402	0.162
CRM5. Inadequate funding	1.34	0.476	0.227
CRM6. Ineffective policies on resource allocation	1.34	0.476	0.227
CRM3. Overcrowded classrooms	1.35	0.479	0.230
CRM4. Poor infrastructure	1.46	0.501	0.251
CRM2. Lack of qualified teaching staff	1.61	0.490	0.240

Scale code for challenges in Resource management: 1 = yes ; 2 = No
Source: Research Work 2025

The mean values range from 1.20 (CRM1) to 1.61 (CM2). Since 1 represents "Yes" and 2 represents "No", to an item as a challenge, a mean closer to 1 indicates a higher proportion of "Yes" responses (i.e., challenges are present), while a mean closer to 2 indicates a higher proportion of "No" responses (i.e., challenges are not present).

The data suggests that insufficient didactic materials (CRM1), inadequate funding (CRM5), ineffective policies on resource allocation (CRM6), and overcrowded classrooms (CRM3) are the most prevalent challenges in resource management faced by the respondents. Poor infrastructure (CRM4) is also a significant challenge, though with slightly more varied opinions. Lack of qualified teaching staff (CRM2) appears to be the least common challenge among those listed. The low standard deviations and variances for most items indicate a general consensus among respondents regarding the presence or absence of these challenges.

CRM1. Insufficient didactic materials:

Mean = 1.20: This is very close to 1, indicating that "Insufficient didactic materials" is a highly prevalent challenge. A large majority of respondents (80%) answered "Yes" to this. Only 20% disagreed.

Standard Deviation = 0.402, Variance = 0.162: These low values suggest little variability in responses, reinforcing that most respondents agreed this is a challenge.

Table 7: Frequencies of Challenges 1

Frequencies of CRM1			
CRM1	**Counts**	**% of Total**	**Cumulative %**
Agree	80	80.0%	80.0%
Disagree	20	20.0%	100.0%

CRM2. Lack of qualified teaching staff:

Mean = 1.61: This value is closer to 2 than 1, suggesting that "Lack of qualified teaching staff" is less frequently reported as a challenge compared to others. More respondents likely answered "No" to this.

Standard Deviation = 0.490, Variance = 0.240: These values indicate slightly more variability than CRM1, reflecting a more balanced distribution of "Yes" and "No" responses, but still leaning towards "No".

CRM3. Overcrowded classrooms:

Mean = 1.35: This indicates that "Overcrowded classrooms" is a common challenge, with a good majority of respondents (65%) reporting it as "Yes". Only 35% disagreed.

Standard Deviation = 0.479, Variance = 0.230: These values show moderate variability, but still a clear tendency towards "Yes".

Table 8:Frequencies of Challenges 3

Frequencies of CM3			
CM3	**Counts**	**% of Total**	**Cumulative %**
YES	65	65.0%	65.0%
Disagree	35	35.0%	100.0%

CRM4. Poor infrastructure:

Mean = 1.46: "Poor infrastructure" is also a notable challenge, though slightly less prevalent than CRM1 and CRM3. The mean suggests a stronger presence of "Yes" responses than "No".

Standard Deviation = 0.501, Variance = 0.251: These are the highest standard deviation and variance among the challenges, indicating the most spread or disagreement in responses for this item, though still predominantly "Yes".

CRM5. Inadequate funding:

Mean = 1.34: "Inadequate funding" is reported as a significant challenge, with a high proportion of "Yes" responses.

Standard Deviation = 0.476, Variance = 0.227: These values indicate a consistent reporting of this as a challenge.

CRM6. Ineffective policies on resource allocation:

Mean = 1.34: Similar to CRM5, "Ineffective policies on resource allocation" is also a frequently reported challenge by 66% of respondents.

Standard Deviation = 0.476, Variance = 0.227: Consistent reporting, similar to CRM5.

Table 9:Frequencies of Challenges 6

Frequencies of CM6			
CM6	**Counts**	**% of Total**	**Cumulative %**
Agree	66	66.0%	66.0%
Disagree	34	34.0%	100.0%

Teachers' Adaptation to Resource Shortage

Table 10:Teachers' Adaptation to Resource Shortage

Key Findings (Grouped Responses by Theme):

Strategy	Frequency	Percent
Improvisation (including variations)	33	33.0%
Personal provision (buying/providing self)	9	9.0%
Collaboration/sharing with colleagues	7	7.0%
Use of local/available resources	4	4.0%
Involving parents/PTA/stakeholders	6	6.0%
Seeking school or administrative support	5	5.0%
Planning ahead/alternative strategies	4	4.0%
Use of online resources/research	2	2.0%
Teaching without resources	2	2.0%
Other/Miscellaneous	28	28.0%
Total	**100**	**100.0%**

Source: Research Work 2025

Improvisation is the most common strategy, cited by one-third (33%) of the respondents, showing a strong reliance on creativity and adaptability among teachers in addressing resource shortages.

Personal responsibility is also significant as 9% of respondents said they personally provide or purchase materials when needed. A smaller but notable percentage rely on collaborative approaches, such as sharing with colleagues (7%) or involving external stakeholders like parents or PTAs (6%). Few teachers (4%) reported planning ahead or adapting the lesson to use alternative or locally available materials. Digital/online resources and institutional support are less commonly used or possibly less accessible, as indicated by the low frequencies.

The "Other/Miscellaneous" category (28%) includes unclear or ambiguous responses, duplicate entries, typos, and overlapping ideas, which suggests a need for data cleaning or more structured response options in future surveys.

We can thus conclude that most teachers cope with resource shortages through improvisation and self-funding, reflecting resilience but also indicating gaps in institutional support. Collaboration and stakeholder engagement are underutilized strategies that could be encouraged. The data also reveal the need for structured resource planning and better access to teaching aids.

As to the question: **What improvements do you suggest to enhance resource management in your school?**

After grouping similar responses, several key themes emerged as quantified and presented in the table 16 below.

Multiple respondents (20%) emphasized the need to involve teachers, students, class teachers, administrators, and the PTA in decision-making, resource planning and budgeting, and distribution processes. Example of such phrases include:

- *"Teachers be involved in decision making,"*
- *"Involve teachers and administrators,"*
- *"Teacher and student participation,»* etc.

A large portion of responses (≈ 25%) called for: Early or timely supply of resources, sufficient quantity and quality, better planning at the beginning of the year, and equitable distribution

Example of these phrases amongst others include: *"Resources be supplied on time," "Enough be provided," or "Give at beginning of school year."*

Here is the tabular presentation of the responses grouped by themes, with frequencies and percentages:

Table 11: Themes on Improvements to Enhance Resource Management In Schools

Theme	Grouped Examples / Ideas	Frequency	Percentage (%)
1. Inclusive Decision-Making	Involve teachers, students, PTA, administrators in resource planning and budgeting	20	20.0%
2. Timely and Adequate Provision	Provide resources early, in sufficient quantity and quality, at beginning of school year, equitable distribution	25	25.0%
3. Administrative & Government Responsibility	School administration, head teachers, government, school owners, PTA must provide and support	15	15.0%
4. Training and Capacity Building	Provide training/seminars/workshops on resource management	10	10.0%
5. Inventory and Monitoring Systems	Keep records, digital inventory, resource tracking, labeling, balance sheets, regular reviews	10	10.0%
6. Transparency and Accountability	Transparency, accountability, control teams, proper budgeting	5	5.0%
7. Innovation and Resource Optimization	Reuse, recycle, adapt to what is available, encourage creative problem-solving, community engagement	5	5.0%
8. Collaboration and Sharing	Collaboration among teachers, stakeholders, shared use of resources, communication	5	5.0%
9. Resource Planning and Allocation	Good planning, action plans, resource distribution based on need	5	5.0%
Total		**100**	**100.0%**

Source: Research Work 2025

Several responses (≈ 15%) focused on the role of Head teachers, Administrators, School proprietors, government, and authority in ensuring provision and accountability.

Example phrases: *"Administration should provide," "Government should support," "Head teacher and PTA should provide."etc*

The need for regular training, workshops and seminars on resource management, planning and utilization, and accountability was echoed by 10% of respondent with phrases such as: *"Provide training on resource management," "Training be provided."*

As concerns inventory and monitoring systems 10% of respondents suggested for, digital tracking systems, inventory management, balance sheets and labelling, and record-keeping with responses like: *"Create a digital inventory," "Inventory tracking," "Keep records."etc*

Calls for Transparent distribution, Clear budgeting, and Control teams was made by 5% with sentences such as: "*Transparency," "Accountability," or "Control team."* A similar 5% emphasized on improvisation, adapting to available resources, encouraging problem-solving, and community engagement as evidenced in phrases like: *"Improvise with what is available," "Community involvement," or "Create problem situations for innovation."*

As to the question: How has resource management (good or poor) impacted your teaching outcomes?

The most frequent impact positive judgement described as good by 26% of respondent was resource management. Key issues highlighted included Teaching effectiveness, lesson preparation, stress, motivation, student learning, and time consumption.

The table below shows the responses grouped by themes.

Table 12:Themes

Theme	Description / Examples of Responses	Frequency	Percentage (%)
1. Improved Teaching and Learning Outcomes	Effective delivery, better learning outcomes, improved student understanding, engagement, enjoyable teaching	20	20.0%
2. Facilitates Lesson Preparation & Delivery	Eases planning, saves time, reduces time wastage, supports smooth classroom delivery	15	15.0%
3. Reduces Stress and Improves Morale	Less pressure on teachers, increased motivation, stress reduction, improved teacher well-being	10	10.0%
4. Increased Teacher Workload	Improvisation required, time-consuming prep, workload increases due to lack of resources	10	10.0%
5. Student Engagement and Motivation	With poor resources: decreased interest, students are discouraged, poor participation	10	10.0%
6. Poor Teaching Outcomes (due to poor resources)	Ineffective teaching, lessons poorly taught, disrupted delivery, limited instruction, poor results	15	15.0%
7. Mixed Impact (both positive and negative)	Resource availability enhances; unavailability disrupts. Learning impacted either way	10	10.0%
8. No Significant Impact / Managed Regardless	Teacher manages without resources or adapts with improvisation	5	5.0%
9. General Opinions ("good"/"poor")	Responses marked simply as "good" (26) or "poor" (4), lacking detail but indicating clear judgment	30	30.0%

Source: Research Work 2025

Conclusion research question 3

SRQ3. - From table 11, 15 & 17 , we can conclude that the main challenges faced by teachers in decreasing order of severity include: insufficient didactic material; inadequate funding;

ineffective policies; overcrowded classroom and poor infrastructure. Adaptation strategies by teachers are through improvision, collaboration and sharing with colleagues and Parent teachers Association. Resource management could be enhances by inclusive decision-making; timely and adequate provision; training and capacity building; inventory and monitoring systems; transparency and accountability; and resource planning and allocation

Bivariate Nonparametric Correlation

Specific Research Question 4. To what extent do dimensions of resource management practices predict teachers' efficiency?

Correlation between Types of Resource Management Practices and Teachers' Efficiency

Table 13:Bivariate Nonparametric Correlation

Correlations

			MaterialRMP	InfrastructuralRMP	FinancialRMP	HumanRMP	ClassroomManagementTE	StudentPerformanceTE	AlternativeStrategyTE	CommitmentMotivationTE	LessonPreparationTE
Spearman's rho	MaterialRMP	Correlation Coefficient	1.000	,625**	,703**	,773**	,220*	-,040	,308**	-,015	-,173
		Sig. (2-tailed)	.	,000	,000	,000	,028	,690	,002	,882	,085
		N	100	100	100	100	100	100	100	100	100
	InfrastructuralRMP	Correlation Coefficient	,625**	1,000	,762**	,651**	,035	-,139	,025	-,079	-,273**
		Sig. (2-tailed)	,000	.	,000	,000	,726	,167	,808	,432	,006
		N	100	100	100	100	100	100	100	100	100
	FinancialRMP	Correlation Coefficient	,703**	,762**	1,000	,697**	,135	-,097	,132	-,094	-,244*
		Sig. (2-tailed)	,000	,000	.	,000	,181	,335	,190	,350	,015
		N	100	100	100	100	100	100	100	100	100
	HumanRMP	Correlation Coefficient	,773**	,651**	,697**	1,000	,303**	-,018	,356**	-,028	-,174
		Sig. (2-tailed)	,000	,000	,000	.	,002	,856	,000	,780	,083
		N	100	100	100	100	100	100	100	100	100
	ClassroomManagementTE	Correlation Coefficient	,220*	,035	,135	,303**	1,000	,595**	,520**	,463**	,489**
		Sig. (2-tailed)	,028	,726	,181	,002	.	,000	,000	,000	,000
		N	100	100	100	100	100	100	100	100	100
	StudentPerformanceTE	Correlation Coefficient	-,040	-,139	-,097	-,018	,595**	1,000	,342**	,763**	,524**
		Sig. (2-tailed)	,690	,167	,335	,856	,000	.	,000	,000	,000
		N	100	100	100	100	100	100	100	100	100
	AlternativeStrategyTE	Correlation Coefficient	,308**	,025	,132	,356**	,520**	,342**	1,000	,294**	,159
		Sig. (2-tailed)	,002	,808	,190	,000	,000	,000	.	,003	,115
		N	100	100	100	100	100	100	100	100	100
	CommitmentMotivationTE	Correlation Coefficient	-,015	-,079	-,094	-,028	,463**	,763**	,294**	1,000	,474**
		Sig. (2-tailed)	,882	,432	,350	,780	,000	,000	,003	.	,000
		N	100	100	100	100	100	100	100	100	100
	LessonPreparationTE	Correlation Coefficient	-,173	-,273**	-,244*	-,174	,489**	,524**	,159	,474**	1,000
		Sig. (2-tailed)	,085	,006	,015	,083	,000	,000	,115	,000	.
		N	100	100	100	100	100	100	100	100	100

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

*. Correlation is significant at the 0.05 level (2-tailed).

A Spearman's rank-order correlation was conducted to examine the relationship between the types of resource management practice and teacher's efficacy. The results indicated:

A statistically significant positive moderate relationship between MATERIAL resource management practice and ALTERNATIVE STRATEGY as indicator of teacher's efficacy, r = 0.308, p < .002. This suggests that schools with better material resources encourage teachers to use varied strategies.

A significant positive moderate relationship between HUMAN resource management practice and alternative strategy as indicator of teacher's efficacy, r = 0.356, p < .0020. This suggests that schools teachers innovate more when human resources (support staff, mentors, etc.) are strong.

A significant positive moderate relationship between HUMAN resource management practice and CLASSROOM MANAGEMENT as indicator of teacher's efficacy, $rs(98) = 0.303$, $p < .0020$. This suggests adequate human resources enhance teacher control in classrooms.

A significant positive weak relationship between MATERIAL resource management practice and CLASSROOM MANAGEMENT as indicator of teacher's efficacy, $rs(98) = 0.303$, $p < .0020$. This suggests adequate human resources enhance teacher control in classrooms.

A significant negative weak relationship between FINANCIAL resource management practice and LESSON PREPARATION as indicator of teacher's efficacy, $rs(98) = -0.222$, $p < .028$. Access to materials improves classroom management.

The other resource management practice variables had no statistically significant relationship with the variables of teacher's efficacy.

Correlation between nature of Resource Management Practices and Teachers' Efficiency

A Spearman's rank-order correlation was conducted to examine the relationship between the nature of resource management practice and teacher's efficacy. DECENTRALIZATION is significantly correlated with four out of the five indicators of teacher's efficiency. Namely:

There is a moderate, highly significant positive correlation between decentralization of resource management practices and student performance with $r = .456$, $p < .001$). This is an interesting finding, suggesting that student performance might benefit from decentralized resource management.

There is a moderate, highly significant positive correlation between decentralization of resource management practices and teacher's commitment with $r = .332$, $p < .001$. This implies that increased commitment and motivation might be related to more decentralized resource management.

Table 14:Correlation

Correlations

			ClassroomManagementTE	StudentPerformanceTE	AlternativeStrategyTE	CommitmentMotivationTE	LessonPreparationTE	DecisionRMP	MaintenanceRMP	TrainingRMP	DecentralisationRMP	AdequacyRMP
Spearman's rho	ClassroomManagementTE	Correlation Coefficient	1.000	.595**	.520**	.463**	.489**	.083	.126	.324**	.290**	-.023
		Sig. (2-tailed)		.000	.000	.000	.000	.413	.213	.001	.003	.819
		N	100	100	100	100	100	100	100	100	100	100
	StudentPerformanceTE	Correlation Coefficient	.595**	1.000	.342**	.763**	.524**	-.050	-.132	.208*	.456**	-.089
		Sig. (2-tailed)	.000		.000	.000	.000	.623	.190	.038	.000	.402
		N	100	100	100	100	100	100	100	100	100	100
	AlternativeStrategyTE	Correlation Coefficient	.520**	.342**	1.000	.294**	.159	.151	.224*	.341**	.163	.114
		Sig. (2-tailed)	.000	.000		.003	.115	.133	.025	.001	.105	.257
		N	100	100	100	100	100	100	100	100	100	100
	CommitmentMotivationTE	Correlation Coefficient	.463**	.763**	.294**	1.000	.474**	-.027	-.124	.169	.332**	-.030
		Sig. (2-tailed)	.000	.000	.003		.000	.787	.219	.092	.001	.764
		N	100	100	100	100	100	100	100	100	100	100
	LessonPreparationTE	Correlation Coefficient	.489**	.524**	.159	.474**	1.000	-.228*	-.189	.053	.205*	-.292**
		Sig. (2-tailed)	.000	.000	.115	.000		.023	.060	.598	.041	.003
		N	100	100	100	100	100	100	100	100	100	100
	DecisionRMP	Correlation Coefficient	.083	-.050	.151	-.027	-.228*	1.000	.810**	.283**	-.083	.647**
		Sig. (2-tailed)	.413	.623	.133	.787	.023		.000	.004	.411	.000
		N	100	100	100	100	100	100	100	100	100	100
	MaintenanceRMP	Correlation Coefficient	.126	-.132	.224*	-.124	-.189	.810**	1.000	.385**	-.025	.814**
		Sig. (2-tailed)	.213	.190	.025	.219	.060	.000		.000	.806	.000
		N	100	100	100	100	100	100	100	100	100	100
	TrainingRMP	Correlation Coefficient	.324**	.208*	.341**	.169	.053	.283**	.385**	1.000	.093	.346**
		Sig. (2-tailed)	.001	.038	.001	.092	.598	.004	.000		.356	.000
		N	100	100	100	100	100	100	100	100	100	100
	DecentralisationRMP	Correlation Coefficient	.290**	.456**	.163	.332**	.205*	-.083	-.025	.093	1.000	-.072
		Sig. (2-tailed)	.003	.000	.105	.001	.041	.411	.806	.356		.477
		N	100	100	100	100	100	100	100	100	100	100
	AdequacyRMP	Correlation Coefficient	-.023	-.089	.114	-.030	-.292**	.647**	.814**	.346**	-.072	1.000
		Sig. (2-tailed)	.819	.402	.257	.764	.003	.000	.000	.000	.477	
		N	100	100	100	100	100	100	100	100	100	100

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

*. Correlation is significant at the 0.05 level (2-tailed).

There is a weak to moderate, significant positive correlation between decentralization of resource management practices and classroom management at ($r = .290$, $p < .01$).

Decentralization of resource management practices are not statistically significant ($p > .05$) with use of alternative strategies ($r = .2163$, $p = .105$).

TRAINING in resource management practices is significantly correlated with three out of the five indicators of teacher's efficiency. This indicates that training like decentralization, is a key factor in improving various aspects of resource management and related educational outcomes.

There is a moderate, significant positive correlation between training in resource management practices and classroom management by teachers at $r = .324$, $p < .01$. This suggests that improved classroom management might be linked to better training in resource management.

There is a moderate, highly significant positive correlation between training in resource management practices and use of alternative strategies by teachers, $r = .341$, $p < .001$. This suggests that training in resource management might encourage the use of alternative strategies.

There is a weak, significant positive correlation between training in resource management and student performance at $r = .208$, $p < .05$

As concerns maintenance RMP, it shows weak, significant positive correlation with use of alternative Strategy by teachers at $r = .224$, $p < .05$. Other indicators of teachers' efficiency and maintenance of resource management practices are not statistically significant.

As concerns adequacy of RMP, it shows weak to moderate, significant negative correlation with lesson preparation by teachers at $r = .292$, $p < .05$. It suggests that as lesson preparation

increases, the perceived adequacy of resource management practices tends to decrease. This could imply that teachers who prepare more thoroughly become more aware of resource shortcomings, or that a lack of adequate resources makes lesson preparation more challenging. Other indicators of teachers' efficiency and maintenance of resource management practices are not statistically significant.

Generally, Student Performance, Classroom Management, Commitment/Motivation, and Lesson Preparation as indicators of teacher's efficacy are all strongly and positively inter-correlated, especially among themselves. This highlights their interconnectedness in the educational process.

Similarly, Decision-making, Maintenance, and Training in Resource Management Practices (RMP) are significantly and positively correlated with each other and with the perceived Adequacy of RMP. This suggests that good practices in managing resources lead to a perception of better resource availability.

We conclude by saying that there is a significant positive correlation with each other. Effective resource management equips teachers with the necessary tools, materials and organisational support necessary to prepare quality lessons, maintain a conducive learning environment, qnd sustain motivation. Teachers in turn utilize these resources strategically, improving student outcomes and optimizing classroom performance. It shows that strengthening resource management practices directly enhance teacher efficiency.

Multiple Regression

Classroom Management Efficiency as measure of teacher's efficiency

As Concerns statistically significant predictors (at $\alpha=0.05$), Decentralisation RMP has a statistically significant positive impact on Classroom Management TE. Human RMP is borderline statistically significant with a positive impact.

As to the Relative Strength of Predictors (based on Standardized Estimates), Human RMP appears to have the strongest positive unique contribution to Classroom Management TE.

Decentralisation RMP also has a notable positive unique contribution.

Table 15:Multiple Regression

Model Coefficients – Classroom Management TE					
Predictor	**Estimate**	**SE**	**t**	**p**	**Stand. Estimate**
Intercept	8.4661	0.955	8.864	<.001	
MaterialRMP	-0.1459	0.167	-0.872	0.385	-0.1792
InfrastructuralRMP	-0.2259	0.209	-1.079	0.284	-0.1738
FinancialRMP	-0.1251	0.241	-0.518	0.606	-0.0878
HumanRMP	0.3076	0.155	1.989	0.050	0.3606
DecisionRMP	0.0836	0.131	0.639	0.524	0.0874
MaintenanceRMP	0.0600	0.154	0.389	0.698	0.0746
TrainingRMP	0.3196	0.175	1.824	0.071	0.2295
DecentralisationRMP	0.5290	0.187	2.823	0.006	0.2738
AdequacyRMP	-0.1964	0.197	-0.999	0.321	-0.1315

Source: Research Work 2025

Table 16:Overall Model

Model Fit Measures						
				Overall Model Test		
Model	**R**	**R²**	**F**	**df1**	**df2**	**p**
1	0.459	**0.210**	2.66	9	90	0.009
Note. Models estimated using sample size of N=100						

Source: Research Work 2025

From R-squared (R^2) values, the model explains 21% of the variance in student performance ($R^2 = 0.182$). This suggests a moderate fit. The F-statistic is 2.66, which is significant ($p < 0.009$). This indicates that the predictors collectively contribute to the model.

Student performance as measure of teacher's efficiency

The table shows the results of a regression analysis with several predictors (Material RMP, Infrastructural RMP, Financial RMP, etc.) and their corresponding coefficients. The results suggest that decentralization (Decentralisation RMP) is a crucial factor in improving student performance. Other factors, such as material resources, infrastructure, and financial resources, do not seem to have a significant impact on student performance in this model.

Table 17:Student Performances TE

Model Coefficients – Student Performance TE					
Predictor	**Estimate**	**SE**	**t**	**p**	**Stand. Estimate**
Intercept	6.3479	0.6512	9.748	<.001	
MaterialRMP	-0.0214	0.1140	-0.188	0.852	-0.0378
InfrastructuralRMP	-0.0602	0.1427	-0.421	0.674	-0.0666
FinancialRMP	-0.0894	0.1646	-0.543	0.589	-0.0903
HumanRMP	0.0864	0.1055	0.819	0.415	0.1458
DecisionRMP	0.0207	0.0892	0.232	0.817	0.0311
MaintenanceRMP	-0.1170	0.1051	-1.114	0.268	-0.2093
TrainingRMP	0.1722	0.1194	1.442	0.153	0.1780
DecentralisationRMP	0.5556	0.1277	4.350	<.001	0.4138
AdequacyRMP	-0.0231	0.1340	-0.172	0.864	-0.0222

Source: Research Work 2025

Decentralisation RMP has a significant positive effect on student performance ($p < 0.001$), with a standardized estimate of 0.4138. This suggests that decentralization is strongly associated with better student performance.

Most predictors, such as Material MP, Infrastructural MP, Financial MP, Human MP, Decision MP, Maintenance MP, Training MP, and Adequacy MP, do not show significant effects on student performance ($p > 0.05$).

Direction of Effects: The coefficients (Estimate) show the direction of the relationships. For example, Material RMP has a negative effect (-0.0214), while Training RMP has a positive effect (0.1722).

Model Fit Measures						
			Overall Model Test			
Model	**R**	**R^2**	**F**	**df1**	**df2**	**p**
1	0.426	0.182	10.8	2	97	<.001
Note. Models estimated using sample size of N=100						

Source: Research Work 2025

From R-squared (R^2) values, the model explains 18.2% of the variance in student performance ($R^2 = 0.182$). This suggests a moderate fit. The F-statistic is 10.8, which is highly significant ($p < 0.001$). This indicates that the predictors collectively contribute to the model.

Alternative Strategy as measure of teacher's efficiency

Table 18:Alternative Strategy TE

Model Coefficients – Alternative Strategy TE					
Predictor	**Estimate**	**SE**	**t**	**p**	**Stand. Estimate**
Intercept	8.716	1.003	8.692	<.001	
MaterialRMP	-0.106	0.175	-0.603	0.548	-0.1246
InfrastructuralRMP	-0.448	0.218	-2.054	0.043	-0.3304
FinancialRMP	-0.175	0.253	-0.693	0.490	-0.1181
HumanRMP	0.184	0.162	1.135	0.259	0.2069
DecisionRMP	0.120	0.129	0.932	0.354	0.1208
MaintenanceRMP	0.289	0.159	1.816	0.073	0.3447
TrainingRMP	0.328	0.184	1.784	0.078	0.2260
DecentralisationRMP	0.127	0.197	0.645	0.521	0.0629

Source: Research Work 2025

Infrastructural RMP has a significant negative effect on Alternative Strategy TE (p = 0.043), with a standardized estimate of -0.3304. This suggests that better infrastructure is associated with lower alternative strategy scores.

Most predictors, such as Material MP, Financial MP, Human MP, Decision MP, Maintenance MP, Training MP, and Decentralisation MP, do not show significant effects on Alternative Strategy TE.

The results suggest that infrastructure has a significant negative relationship with alternative strategy scores. Maintenance and training resources show potential positive relationships, but these effects are not statistically significant at the 0.05 level.

Model Fit Measures						
			Overall Model Test			
Model	**R**	**R²**	**F**	**df1**	**df2**	**p**
1	0.439	0.192	2.38	9	90	0.018
Note. Models estimated using sample size of N=100						

Source: Research Work 2025

The model explains 19.2% of the variance in the outcome variable ($R^2 = 0.192$). This suggests a moderate fit. The F-statistic is 2.38, which is significant ($p = 0.018$). This indicates that the predictors collectively contribute to the model.

Commitment and Motivation as Measure of Teacher's Efficiency

Decentralisation MP has a significant positive effect on Commitment Motivation TE ($p = 0.001$), with a standardized estimate of 0.3360. This suggests that decentralization is strongly associated with higher commitment motivation.

All other predictors, such as Material MP, Infrastructural MP, Financial MP, Human MP, Decision MP, Maintenance MP, and Training MP, do not show significant effects on Commitment Motivation TE.

The results suggest that decentralization (Decentralisation MP) is a crucial factor in enhancing commitment motivation. None of the other resource management practices show significant relationships with commitment motivation in this model.

Table 19: Commitment Motivation TE

Model Coefficients – Commitment Motivation TE

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept	3.1165	0.4256	7.323	<.001	
MaterialRMP	-0.0236	0.0745	-0.317	0.752	-0.0676
InfrastructuralRMP	0.0223	0.0925	0.241	0.810	0.0400
FinancialRMP	-0.0723	0.1074	-0.673	0.502	-0.1185
HumanRMP	-0.0105	0.0688	-0.152	0.880	-0.0286
DecisionRMP	0.0564	0.0549	1.027	0.307	0.1377
MaintenanceRMP	-0.0243	0.0676	-0.359	0.720	-0.0704
TrainingRMP	0.0668	0.0781	0.856	0.394	0.1120
DecentralisationRMP	0.2781	0.0835	3.332	0.001	0.3360

Source: Research Work 2025

Model Fit Measures

			Overall Model Test			
Model	**R**	**R^2**	**F**	**df1**	**df2**	**p**
1	0.376	0.141	1.64	9	90	0.115

Note. Models estimated using sample size of N=100

Source: Research Work 2025

The model explains 14.1% of the variance in the outcome variable ($R^2 = 0.141$). This suggests a relatively weak fit. The F-statistic is 1.64, which is not significant ($p = 0.115$). This indicates that the predictors, as a set, do not collectively contribute significantly to the model.

Lesson Preparation as Measure of Teacher's Efficiency

The results suggest that none of the resource management practices have a statistically significant impact on lesson preparation in this model. However, training resources might have a positive influence, warranting further investigation.

Table 20: Lesson Preparation TE

Model Coefficients – Lesson Preparation TE

Predictor	Estimate	SE	T	p	Stand. Estimate
Intercept	4.15269	0.4766	8.7127	<.001	
MaterialRMP	-0.08044	0.0834	-0.9644	0.337	-0.20843
InfrastructuralRMP	-0.09866	0.1036	-0.9522	0.344	-0.16007
FinancialRMP	-0.03499	0.1203	-0.2910	0.772	-0.05180
HumanRMP	-0.04612	0.0771	-0.5984	0.551	-0.11402
DecisionRMP	-0.00301	0.0615	-0.0489	0.961	-0.00663
MaintenanceRMP	0.03433	0.0757	0.4533	0.651	0.08996
TrainingRMP	0.16710	0.0874	1.9116	0.059	0.25306
DecentralisationRMP	0.08901	0.0935	0.9521	0.344	0.09713

Source: Research Work 2025

Conclusion SRQ4

Spearman's rank-order correlation showed that a statistically significant positive moderate relationship between type of resources (Human, material and financial) and teachers efficiency (alternative strategies & classroom management). Equally a significant positive moderate relationship between nature of resources resource management (decentralisation, training) and teachers' efficiency.

Multiple regression revealed decentralisation management practices has a significant positive effect on Commitment ($F= 1.64$, $p< 0.115$), classroom management ($F= 2.66$, $p< 0.006$) and students performance ($F= 10.8$, $p< 0.001$) as measures of teachers' efficiency. Also infrastructure has a positive effect on use of alternative strategies ($F= 2.38$, $p< 0.018$) as measure of teachers' efficiency. None of the resource management practices have a statistically significant impact on lesson preparation

Group Differences.

Specific research question 5. Do teachers' perceptions of resource management practices and teacher efficiency vary with demographic & Academic factors

Sex

Group description (sex)

Group Descriptives						
	Group	**N**	**Mean**	**Median**	**SD**	**SE**
Training RMP	Male	55	3.33	4.00	1.428	0.193
	Female	45	3.93	4.00	1.19	0.178

Source: Research Work 2025

These descriptive statistics shows the female participants, on average, reported higher levels of training in resource management practices (Mean = 3.93) compared to their male counterparts (Mean = 3.33). This difference, although not extremely large in absolute terms, was found to be statistically significant, meaning it's unlikely due to random chance.

The Male group (SD = 1.428) shows slightly more variability or spread in their "Training RMP" scores compared to the Female group (SD = 1.19). This means male responses were a bit more diverse.

Table 21: Independent T-test results for Effect of Sex on Resource Management Practice

Independent Samples T-Test					
		Statistic	**p**	**Mean difference**	**SE difference**
MaterialRMP	Mann-Whitney U	1184	0.708	-6.81e−5	
InfrastructuralRMP	Mann-Whitney U	1197	0.776	-5.46e−5	
FinancialRMP	Mann-Whitney U	1176	0.660	-6.32e−5	
HumanRMP	Mann-Whitney U	1218	0.891	-2.16e−5	
DecisionRMP	Mann-Whitney U	1142	0.499	-2.28e−5	
MaintenanceRMP	Mann-Whitney U	1166	0.612	3.14e-5	
TrainingRMP	Mann-Whitney U	929	0.024	-5.29e−5	
DecentralisationRMP	Mann-Whitney U	1232	0.967	3.80e-5	
AdequacyRMP	Mann-Whitney U	1194	0.756	-6.56e−5	
Note. H_a $\mu_{Male} \neq \mu_{Female}$					

Source: Research Work 2025

The table presents the results of Mann-Whitney U tests conducted for various resource management practices (RMP) variables. The alternative hypothesis (Ha: μMale ≠ μFemale) suggests that the tests are comparing a variable between two independent groups, males and females. The Mann-Whitney U test was used because the data is not normally distributed.

The column p represents the (p-value), that is, the probability value. If $p < .05$, the difference between the two groups is considered statistically significant. This means it's unlikely that the observed difference occurred by random chance, and we can infer that the distributions (and often, the medians) of the variable are different for males and females. If $p \geq .05$, the difference is not statistically significant.

Based on these Mann-Whitney U test results, it appears that sex (male vs. female) does not have a statistically significant influence on perceptions or experiences related to most aspects of Resource Management Practices (Material, Infrastructural, Financial, Human, Decision, Maintenance, Decentralization, Adequacy).

The only exception is Training in Resource Management Practices (Training RMP), where a statistically significant difference was found between males and females ($p = .024$). However, the associated "mean difference" is extremely small, suggesting that while the statistical test detected a difference in the distributions of ranks, the practical significance of this difference in actual scores might be very limited.

Age group

Table 22: Age Group

Group Descriptives

	Age	N	Mean	SD	SE
MaintenanceRMP	less than 20 years	3	2.67	1.15	0.667
	20 - 30 years	22	6.23	2.76	0.588
	31 - 40 years	50	6.80	2.13	0.301
	above 40 years	25	6.68	2.14	0.427

Source: Research Work 2025

There appears to be a notable age rated pattern. Individuals in the youngest age group (less than 20) report considerably lower Maintenance RMP scores. Scores then significantly increase for the 20-30 age group and remain high for the 31-40 and above 40 years groups.

The 31-40 years age group reports the highest average Maintenance RMP score, followed very closely by the "above 40 years" group. The "less than 20 years" age group has markedly lower

Maintenance RMP scores. The older age groups (31-40 and above 40) show slightly more consistent responses (lower standard deviations relative to their means) compared to the 20-30 age group.

Table 23: One Way ANOVA

One-Way ANOVA (Welch's)				
	F	**df1**	**df2**	**p**
MaterialRMP	2.226	3	9.40	0.152
InfrastructuralRMP	1.601	3	9.75	0.252
FinancialRMP	0.312	3	9.22	0.816
HumanRMP	2.196	3	9.34	0.156
Maintenance RMP	9.857	3	10.74	0.002
DecentralisationRMP	0.189	3	9.06	0.901

This table presents the results of a One-Way ANOVA (Welch's F-test) for several Resource Management Practice (RMP) variables. A One-Way ANOVA is used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) age groups. Welch's F-test is an alternative to the standard ANOVA when the assumption of homogeneity of variances (that the variances of the groups are roughly equal) is violated. Welch's test is more robust when group sizes are unequal or variances differ. Our Null Hypothesis (H0) is that the means of all age groups are equal (e.g., $\mu1=\mu2=\mu3=\mu4$). The Alternative Hypothesis (Ha): At least one group mean is different from the others.

A larger F-value suggests a greater difference between group means relative to the variation within groups. If $p < .05$, the difference is statistically significant, meaning we reject the null hypothesis and conclude that at least one group mean is significantly different from the others. If $p \geq .05$, the difference is not statistically significant.

The results shows that there is only a statistically significant difference maintenance RMP ($F = 9.857$, $p = .002$) among the four groups. This implies that the level of Maintenance RMP varies significantly across age groups. The very low mean of the "less than 20 years" group (2.67) stands out significantly from the much higher means of the other three older groups (6.23, 6.80, 6.68).For Material RMP, Infrastructural RMP, Financial RMP, Human RMP, and Decentralisation RMP, there were no statistically significant differences found in the mean scores among the four groups.

Experience

Table 24: Experiences

	Group Descriptives				
	Experience	**N**	**Mean**	**SD**	**SE**
MaterialRMP	0 - 5years	11	6.18	2.822	0.851
	6-10years	23	5.96	2.755	0.574
	11 - 15 years	48	6.67	2.117	0.306
	above 16 years	18	7.22	1.833	0.432
InfrastructuralRMP	0 - 5years	11	3.00	1.789	0.539
	6-10years	23	2.83	1.527	0.318
	11 - 15 years	48	3.13	1.362	0.197
	above 16 years	18	3.06	1.474	0.347
FinancialRMP	0 - 5years	11	3.09	1.640	0.495
	6-10years	23	2.83	1.337	0.279
	11 - 15 years	48	2.98	1.313	0.189
	above 16 years	18	3.11	1.231	0.290
HumanRMP	0 - 5years	11	6.27	2.901	0.875
	6-10years	23	5.91	2.372	0.495
	11 - 15 years	48	6.52	2.104	0.304
	above 16 years	18	7.39	1.650	0.389
DecisionRMP	0 - 5years	11	5.45	2.770	0.835
	6-10years	23	5.17	2.329	0.486
	11 - 15 years	48	6.06	1.450	0.209
	above 16 years	18	6.28	2.081	0.490
MaintenanceRMP	0 - 5years	11	6.09	3.048	0.919
	6-10years	23	5.96	2.345	0.489
	11 - 15 years	48	6.73	2.313	0.334
	above 16 years	18	6.94	1.955	0.461
TrainingRMP	0 - 5years	11	3.09	1.640	0.495
	6-10years	23	3.57	1.472	0.307
	11 - 15 years	48	3.60	1.380	0.199
	above 16 years	18	3.94	0.873	0.206
DecentralisationRMP	0 - 5years	11	4.09	0.944	0.285
	6-10years	23	3.91	1.164	0.243
	11 - 15 years	48	3.88	0.937	0.135
	above 16 years	18	4.00	0.907	0.214
AdequacyRMP	0 - 5years	11	2.27	1.348	0.407
	6-10years	23	2.17	1.230	0.257
	11 - 15 years	48	2.92	1.164	0.168
	above 16 years	18	3.17	1.295	0.305

Source: Research Work 2025

For adequacy, there's a noticeable trend. The two less experienced groups (0-5 and 6-10 years) have lower means (around 2.2), while the two more experienced groups (11-15 and above 16

years) have higher means (around 3.0). This suggests that more experienced individuals perceive the adequacy of RMP more positively. There's a consistent trend of increasing Training RMP scores with more experience. The "above 16 years" group has the highest mean (3.94), and also the lowest variability (SD = 0.873), suggesting very consistent positive responses. Also, there's a clear trend of increasing HumanRMP scores with more experience, with the "above 16 years" group having the highest mean (7.39). The "6-10 years" group has the lowest mean (5.91). Variability (SD) generally decreases with experience. There's an increasing trend in Maintenance RMP scores with higher experience, with the "above 16 years" group showing the highest mean (6.94).

A general increase in Decision RMP scores is observed with more experience, with the "above 16 years" group having the highest mean (6.28) and the "6-10 years" group the lowest (5.17). The SD is notably lower for the "11-15 years" group, indicating more consistent responses.

There's a general trend of increasing Material RMP scores with more experience. The "above 16 years" group has the highest mean (7.22), while the "6-10 years" group has the lowest (5.96). Variability (SD) generally decreases with more experience, suggesting more consistent perceptions among highly experienced individuals. Similar to Infrastructural RMP, the means for Financial RMP are quite similar across all experience groups (ranging from 2.83 to 3.11). No strong trend. For decentralization, the means are very close across all experience groups (ranging from 3.88 to 4.09), showing no clear trend or substantial differences.

Table 25: One Way ANOVA

One-Way ANOVA (Welch's)				
	F	**df1**	**df2**	**p**
MaterialRMP	1.122	3	31.9	0.355
InfrastructuralRMP	0.206	3	31.4	0.891
FinancialRMP	0.179	3	32.1	0.910
HumanRMP	1.983	3	32.2	0.136
DecisionRMP	1.161	3	29.0	0.342
MaintenanceRMP	0.875	3	32.3	0.464
TrainingRMP	1.073	3	33.3	0.374
DecentralisationRMP	0.191	3	32.9	0.902
AdequacyRMP	2.958	3	31.9	0.047

Source: Research Work 2025

Only for AdequacyRMP (p = .047) was a statistically significant difference found among the four groups. This indicates that the perceived adequacy of resource management practices varies significantly across at least some of these groups.

For Material RMP, Infrastructural RMP, Financial RMP, Human RMP, Decision RMP, Maintenance RMP, Training RMP, and Decentralisation RMP, there were no statistically significant differences found among the four groups as $p > 0.05$.

Qualification

Table 26: Qualification

Group Descriptives					
	Qualification	**N**	**Mean**	**SD**	**SE**
HumanRMP	Advanced Level	13	6.23	2.651	0.735
	HND in Education	16	6.50	2.251	0.563
	CAPIEMP/CAPIET	60	6.68	2.127	0.275
	Bachelor's Degree	9	6.67	1.658	0.553
	Master Degree	2	2.50	0.707	0.500

Source: Research Work 2025

General High Scores were recorded Excluding Masters**.** Most qualification groups (Advanced Level, HND, CAPIEMP/CAPIET, and Bachelor's) show relatively high mean scores for Human RMP, generally ranging from 6.23 to 6.68. The CAPIEMP/CAPIET group and Bachelor's Degree group have the highest averages.

The "Master Degree" group has an extremely low mean (2.50), but this finding is highly questionable and should be disregarded due to the critically small sample size of N=2. It is impossible to draw meaningful conclusions about Master's degree holders from this data point.

Table 27: One Way ANOVA

One-Way ANOVA (Welch's)				
	F	**df1**	**df2**	**p**
MaterialRMP	0.965	4	6.75	0.484
HumanRMP	11.658	4	8.57	0.002
DecisionRMP	2.158	4	6.94	0.177
MaintenanceRMP	2.480	4	7.09	0.138
TrainingRMP	0.596	4	6.66	0.678
DecentralisationRMP	1.075	4	6.66	0.439
AdequacyRMP	1.316	4	7.28	0.349

Source: Research Work 2025

Only for Human MP (p = .002) was a statistically significant difference found among the five qualification groups. This means that qualification level appears to be related to perceived Human RMP. The descriptive statistics for Human RMP by Qualification indicate that the Master's Degree group, despite its tiny sample size, is the outlier with a notably lower mean, likely driving this significance.

For Material MP, Decision MP, Maintenance MP, Training MP, Decentralisation MP, and Adequacy MP, there were no statistically significant differences found among the five qualification groups.

Conclusion SPQ 5 on group differences

Sex, age group, experience and qualification does not have a global statistically significant influence on perceptions of respondents on Resource Management Practices (Material, Infrastructural, Financial, Human, Decision, Maintenance, Decentralization, Adequacy). From T test and ANOVA test, significant positive correlation was noticed between:

- Sex had an influence only on training with female have a greater score;
- Age group on Maintenance RMP (F = 9.857, p = .002) with very low mean of the "less than 20 years" group (2.67) stands out significantly from the much higher means of the other three older groups (6.23, 6.80, 6.68).
- Experience on adequacy, and qualification on human resource management practices.

Questionnaire Reliability and Validity

Specific Research Question 6. What are the underlying factor structures of the items measuring resource management practices and teachers efficiency?

Reliability Test

Our overall Cronbach's alpha value is 0.888 indicating **excellent internal consistency** for the entire scale. The reliability analysis of 24 items (RMP1–RMP14 and TE1–TE11) in the table below enabled us determine whether removing any item would increase or decrease the overall internal consistency of the scale.

The following items contribute strongly to internal consistency because these Items Lower Alpha When Removed and were retained. These items were RMP1 (α = 0.875), RMP11 (α = 0.877), RMP12 (α = 0.877), RMP5 (α = 0.878), RMP4 (α = 0.879), and RMP8 (α = 0.879). These are core items in measuring resource management.

Items Whose Removal Increases Alpha were potential for exclusion or revision such as RMP14 (α = 0.891), TE6 (α = 0.892), TE7 (α = 0.894) and TE9 (α = 0.890). These items may be less consistent with the overall construct. We deleted item TE6 as it might be ambiguous in wording

or concept. RMP 14 may reflect a broader policy-level view not directly tied to teachers' daily experience, and TE9 might be repetitive or less focused on central constructs.

After deleting RMP14, TE6, and TE7 the reliability increased to 0.894.

Table 28: Item Reliability Statistics

Item Reliability Statistics	Mean	SD	If item dropped Cronbach's α
RMP1. The school provides adequate didactic materials (textbooks, chalks, charts, etc.).	3.26	1.368	0.875
RMP2. The number and qualification of teaching staff are sufficient.	3.01	1.425	0.881
RMP3. The school infrastructure (classrooms, toilets, library, etc.) is well managed.	3.03	1.453	0.880
RMP4. Financial resources are adequately provided for educational activities.	2.98	1.326	0.879
RMP5. Policies on resource allocation are fair and transparent.	2.48	1.150	0.878
RMP6. Teachers participate in resource-related decision-making.	2.68	1.230	0.881
RMP7. Resources are regularly maintained and replaced when worn out.	3.18	1.266	0.878
RMP8. Regular training on resource management can help you better use resources to increase student engagement.	3.60	1.356	0.879
RMP9. All the resources needed in your school are very much adequate.	2.72	1.264	0.881
RMP10. Limited access to ICT tool is a resource constraint common in your teaching experience.	3.29	1.365	0.883
RMP11. There is good maintenance of the available resources in your school.	3.34	1.281	0.877
RMP12. The school administration is primarily responsible for managing and allocating resources in your school.	3.50	1.159	0.877
RMP13. Teachers and administrators are involved in resource planning and decision making.	3.15	1.201	0.886
RMP14. For better resource management in schools, decentralization system has to be adopted.	3.93	0.977	0.891
TE1. I effectively manage my classroom despite resource limitations.	3.98	0.816	0.886
TE2. The availability of resources enhances my lesson delivery.	4.14	0.779	0.886
TE3. Adequate resources lead to better student academic outcomes.	4.26	0.787	0.886
TE4. When resources are available, I feel more committed and motivated.	4.25	0.809	0.888
TE5. I adopt alternative strategies when resources are insufficient.	4.09	0.805	0.888
TE6. There is a strong link between resource sufficiency and my teaching effectiveness.	4.16	0.748	0.892
TE7. Much time is spent on lesson preparation when resources are insufficient.	4.08	0.895	0.894
TE8. Availability of resources help limit time spent on managing student behavior.	4.16	0.838	0.888
TE9. Most classroom management issues are linked to resource inadequacy	3.89	1.024	0.890
TE10. Teachers use technology to support inadequate physical resources.	3.79	0.957	0.886
TE11. I improvised teaching aids using local material can be used to cope with limited resources.	3.73	0.962	0.887

Source: Research Work 2025

Exploratory Factor Analysis (PCA)

We carried out EFA to explore how various items group together to form coherent underlying constructs (latent variables). The Rotation Used was Varimax (orthogonal rotation) which aims to simplify factor structure by maximizing the variance of loadings on each factor.

Loadings greater than 0.5 are considered strong, though in some cases, 0.4–0.5 may be interpreted as moderate.

This Exploratory Factor Analysis (EFA) using Principal Component Analysis (PCA) with Varimax rotation identifies two underlying components (factors) from a set of 24 items related to Resource Management Practices (RMP) and Teacher Efficiency (TE).

- **Component 1 - Resource Management Practices**

This factor reflects the institutional capacity and policy environment for resource management in schools. Items here cluster around resource availability, management practices, and governance. This factor is defined by high loadings on items RMP1 to RMP14, especially items that deal with:

- Provision of resources (e.g., didactic materials - RMP1, finances –RMP4, infrastructure –RMP3)
- Maintenance, planning, and policy of resources – RMP7, RMP11
- Participation in and decentralization of resource management – RMP13 & RMP14

We obtained sample high loadings for the following items: RMP1: 0.873 (Didactic materials); RMP11: 0.831 (Maintenance of resources) ; RMP7: 0.829 (Replacement/maintenance); and RMP4: 0.808 (Financial resources).

- **Component 2: Teacher Efficiency Linked to Resource Use**

This factor represents teachers' perceived effectiveness, motivation, coping strategies, and classroom management, as influenced by resource sufficiency or lack. This factor loads heavily on TE1 to TE11, and to a lesser extent, on RMP14 and some RMP items with management implications on teaching effectiveness.

We obtained sample high loadings for the following items: TE3: 0.834 (Resources and academic outcomes); TE4: 0.812 (Motivation from resource availability); TE2: 0.765 (Lesson delivery improved by resources); and TE5: 0.731 (Strategy when resources lack)

Table 29: RMP Component

Component Loadings			
	Component		
Items	**1**	**2**	**Uniqueness**
RMP1. The school provides adequate didactic materials (textbooks, chalks, charts, etc.).	0.873		0.234
RMP11. There is good maintenance of the available resources in your school.	0.831		0.309
RMP7. Resources are regularly maintained and replaced when worn out.	0.829		0.313
RMP4. Financial resources are adequately provided for educational activities.	0.808		0.344
RMP3. The school infrastructure (classrooms, toilets, library, etc.) is well managed.	0.799		0.354
RMP5. Policies on resource allocation are fair and transparent.	0.782		0.380
RMP12. The school administration is primarily responsible for managing and allocating resources in your school.	0.761		0.379
RMP2. The number and qualification of teaching staff are sufficient.	0.740		0.449
RMP9. All the resources needed in your school are very much adequate.	0.721		0.477
RMP6. Teachers participate in resource-related decision-making.	0.709		0.496
RMP8. Regular training on resource management can help you better use resources to increase student engagement.	0.649		0.534
RMP10. Limited access to ICT tool is a resource constraint common in your teaching experience.	0.647		0.579
RMP13. Teachers and administrators are involved in resource planning and decision making.	0.507		0.742
TE3. Adequate resources lead to better student academic outcomes.		0.834	0.298
TE4. When resources are available, I feel more committed and motivated.		0.812	0.340
TE2. The availability of resources enhances my lesson delivery.		0.765	0.396
TE5. I adopt alternative strategies when resources are insufficient.		0.731	0.465
TE6. There is a strong link between resource sufficiency and my teaching effectiveness.	-0.311	0.653	0.478
TE8. Availability of resources help limit time spent on managing student behaviour.		0.643	0.584
TE1. I effectively manage my classroom despite resource limitations.		0.550	0.655
TE7. Much time is spent on lesson preparation when resources are insufficient.		0.523	0.656
TE9. Most classroom management issues are linked to resource inadequacy		0.470	0.778
RMP14. For better resource management in schools, decentralization system has to be adopted.		0.466	0.783
TE10. Teachers use technology to support inadequate physical resources.		0.402	0.751
TE11. I improvised teaching aids using local material can be used to cope with limited resources.	0.311		0.850
Note. 'varimax' rotation was used			

Source: Research Work 2025

Unique cases.

TE6 showed cross loading. It has a negative loading on Component 1 (-0.311) and moderate positive on Component 2 (0.653), indicating some conceptual overlap but stronger affinity with teacher efficiency.

TE11 (Use of local materials) loads more on Component 1 (0.311), though marginally, suggesting that improvisation in resource-limited settings is seen more as a resource management strategy than strictly an efficiency matter.

RMP14 (Decentralization): Loads more on Component 2 (0.466), implying decentralization is seen by teachers as linked to their ability to function effectively.

Uniqueness Column

The last column on uniqueness describe the proportion of variance not explained by the two components. Lower values (e.g., < 0.4) indicate the item is well explained by the factors.

High uniqueness (e.g., > 0.6–0.7) suggests the item is not well captured by the current two-component model. For examples, RMP1 with Uniqueness value of 0.234 suggest the item is well explained by the factor. TE9 with Uniqueness value of 0.778) suggest the item is poorly explained by the factor.

Thematic Summary

Table 30: Thematic Summary

Component	Label	Nature of Items	Examples
1	Resource Management Practices	Adequacy, governance, maintenance, planning of school resources	RMP1, RMP4, RMP7, RMP12
2	Teacher Efficiency & Resource-Linked Pedagogy	How resource sufficiency or constraints impact teacher motivation, planning, behavior management, use of technology	TE3, TE4, TE5, TE10

Source: Research Work 2025

We can use these two components from EFA as latent constructs in Structural Equation Modeling (SEM). The strong loadings suggest a clean factor structure, supporting construct validity.

The results justify the separation of variables into two clear constructs for:

- Measuring school-level resource management.

- Understanding teacher-level adaptive and efficiency outcomes.

- **Confirmatory Factor Analysis (CFA)**

Table 31: Confirmatory Factor Analysis (CFA)

Factor Loadings

Factor	Indicator	Estimate	SE	Z	p	Stand. Estimate
Resource Management Practice	RMP1. The school provides adequate didactic materials (textbooks, chalks, charts, etc.).	1.185	0.1107	10.71	<.001	0.871
	RMP3. The school infrastructure (classrooms, toilets, library, etc.) is well managed.	1.194	0.1214	9.84	<.001	0.826
	RMP4. Financial resources are adequately provided for educational activities.	1.094	0.1107	9.88	<.001	0.829
	RMP7. Resources are regularly maintained and replaced when worn out.	1.021	0.1068	9.56	<.001	0.810
	RMP11. There is good maintenance of the available resources in your school.	1.015	0.1089	9.32	<.001	0.796
Teachers Efficiency	TE2. The availability of resources enhances my lesson delivery.	0.624	0.0672	9.29	<.001	0.806
	TE3. Adequate resources lead to better student academic outcomes.	0.775	0.0617	12.55	<.001	0.990
	TE4. When resources are available, I feel more committed and motivated.	0.600	0.0712	8.43	<.001	0.746

Source: Research Work 2025

All five items measuring Resource management Practices have high standardized loadings (> 0.79), meaning they strongly and significantly contribute to the latent variable *Resource Management Practice*. The Z-values > 9 and p-values < .001 confirm these are statistically significant. Three items also load significantly and strongly onto the *Teacher Efficiency* factor, especially TE3, which has a very high loading of 0.990 — likely making it the best single indicator of the latent construct.

All loadings are statistically significant Z-values far exceed ±1.96; $p < .001$. Standardized loadings > 0.7 suggest Convergent validity (items measure the same construct) and good reliability of the indicators.

RMP1, RMP4, RMP3 are excellent indicators of school resource practices

TE3 ("Adequate resources lead to better student academic outcomes") is especially critical in modelling teacher efficiency

These results support construct validity as each group of items clearly represents its respective latent construct.

Structural Equation Model

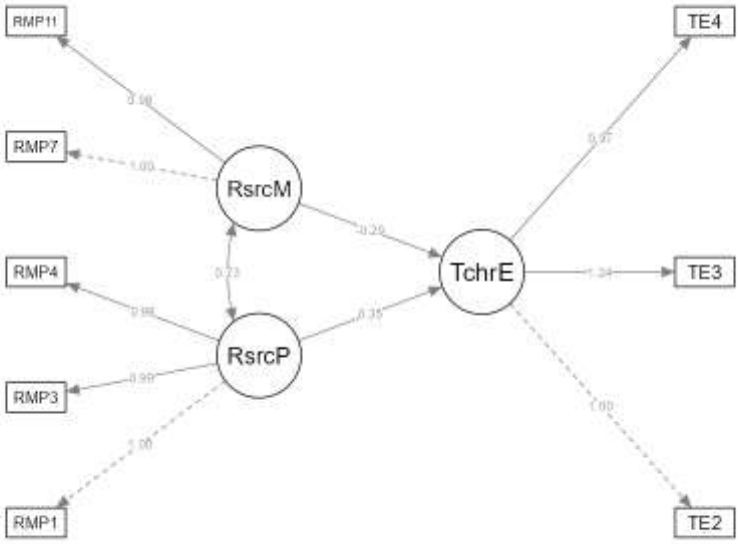

Figure 15: Diagram of Structural Equation Model

This diagram is a Structural Equation Model (SEM) showing how two latent variables—Resource Provision (RsrcP) and Resource Maintenance (RsrcM)—affect Teacher Efficiency (TchrE). The Latent Variables RsrcP (Resource Provision) is represented by observed indicators RMP1, RMP3, RMP4, while RsrcM (Resource Maintenance) is represented by RMP7, RMP11. TchrE (Teacher Efficiency) is measured by TE2, TE3, TE4 as deduced from our Confirmatory factor Analysis.

The measurement model shows how well the observed variables (RMPs and TEs) reflect the latent constructs, while the structural model shows relationships between the latent variables themselves (arrows between circles).

The RsrcP indicators all show strong and reliable loadings on Resource Provision. This suggests these indicators are valid reflections of RsrcP (Resource Provision). RMP1 (λ = 1.00), RMP3 (λ = 0.99), RMP4 (λ = 0.98). Similarly, the RsrcM Indicators RMP7 (λ = 1.00), RMP11 (λ = 0.98) show strong loadings, indicating these are good measures of Resource Management.
For TchrE indicators TE2 (λ = 1.00), TE3 (λ = 1.24), TE4 (λ = 0.97), they also strongly represent Teacher Efficiency.

Structural Model Interpretation (Relationships between Constructs)

There is a strong positive relationship between Resource Provision and Resource Maintenance (RsrcP → RsrcM = 0.73).When schools or institutions provide more resources, the quality of how those resources are maintained also improves significantly.
A moderate positive effect from Resource Provision to Teacher Efficiency (RsrcP → TchrE = 0.35). When more or better resources are available, teachers perform better—though the effect is not as strong as with management. Resource Provision is the key driver of both good maintenance and teacher efficiency.
A negative relationship between Resource Management and Teacher Efficiency (RsrcM → TchrE = -0.29). Surprisingly, better resource management is associated with lower teacher efficiency in this model. This may point to overly rigid or bureaucratic management practices or poor alignment between how resources are managed and actual teaching needs.

Conclusion on SRQ6 (EFA, CFA & SEM)

The underlying factor structures for resource management practices and teacher efficiency are clearly defined by two distinct latent constructs, as revealed by the Exploratory Factor Analysis (EFA), confirmed by the Confirmatory Factor Analysis (CFA), and utilized in the Structural Equation Model (SEM). The research clearly establishes two primary underlying factor structures Resource management Practices and Teachers Efficiency.
The Resource Management Practices (RMP) construct is multi-faceted, encompassing the provision, allocation, maintenance, and governance of various school resources, largely reflecting institutional-level practices. The SEM further refines this into distinct "Resource Provision" and "Resource Maintenance" sub-factors.

Teacher Efficiency (TE) construct focuses on the teachers' perspective, specifically how resource sufficiency or inadequacy impacts their motivation, pedagogical effectiveness, classroom management, and ability to achieve positive academic outcomes.
These distinct factor structures provide a robust foundation for understanding the complex interplay between resource availability, management practices, and their impact on teacher

effectiveness. The strong loadings and statistical significance across EFA and CFA, and the clear measurement model in SEM, support the construct validity of these identified factors.

CHAPTER FIVE
DISCUSSION OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

The chapter presents the findings of the study. The discussion of the findings was supported with related literature and theories reviewed in chapter two. This was carried out in accordance with the findings gotten from the questions of the study. The chapter consist of the discussion, recommendations, limitations, suggestions for further research, and conclusions.

Discussion of Findings

The discussion is structured around the four main categories of school resources: human, material, financial, and time resources. The results obtained from the questionnaire are analyzed in relation to findings from existing literature and relevant theoretical frameworks. Emerging themes are also discussed, with attention to the implications for school leadership and policy.

Research Question One: What are the most prevalent resource management practices in schools as perceived by teachers?

Human Resource Management Practices

The data revealed that most primary schools in Yaoundé 2 implement structured practices in the deployment of teaching staff. Teachers reported that assignments are often based on qualifications and teaching experience. However, there was a common concern about the limited provision of continuous professional development (CPD) programs.

Interpretation: Although staff allocation is generally effective, the lack of in-service training opportunities limits teacher growth and innovation.

Supporting Studies: Okumbe (1998) highlights the importance of ongoing professional development in sustaining teacher effectiveness. Similarly, Bush and Middlewood (2013) stress that without CPD, teachers struggle to adapt to curriculum reforms and pedagogical advancements.

Theoretical Framework: Human Capital Theory (Becker, 1964) underlines the importance of investing in the skills and knowledge of staff to improve organizational productivity. In this context, enhancing teacher capacity through CPD is crucial for better resource utilization and student outcomes.

Material Resource Management Practices

Teachers indicated that schools maintain inventories of textbooks and teaching aids and schedule periodic maintenance of school property. Despite these efforts, many teachers expressed concerns about the inadequacy and unequal distribution of instructional materials, particularly science kits, digital tools, and updated textbooks.

While there is awareness of material management, there are gaps in availability and accessibility.

Mbuagbaw and Fonkeng (2013) found that resource scarcity—especially of ICT tools—is a persistent problem in Cameroonian schools. This limits innovative and practical teaching approaches.

Systems Theory (Katz & Kahn, 1978) suggests that an educational system functions efficiently only when all components—including material resources—are adequately supplied and maintained. The failure of one component affects the entire system.

Another key finding was the lack of teacher participation in decision-making processes related to resource planning and management. In most schools, teachers were excluded from discussions on budget allocation or procurement of materials. However, where teachers were consulted and included in planning, there was a noticeable improvement in their commitment and efficiency.

This aligns with participatory leadership theories, which argue that inclusive decision-making fosters ownership and accountability (Hoy & Miskel, 2001). In Yaoundé II schools, collaborative resource planning promoted a culture of shared responsibility and improved resource utilization.

Financial resource management practices

Findings showed that most schools practice budgeting and financial planning, and key funding sources include government subventions, PTA contributions, and occasional donor support. However, teachers noted that they are rarely involved in financial decisions, leading to concerns about transparency and accountability.

Interpretation: Financial management structures are in place, but stakeholder exclusion reduces effectiveness.

Supporting Studies: Fonkeng and Tamajong (2009) emphasized the role of stakeholder participation in promoting efficient and transparent school finance systems. Their findings suggest that teacher involvement enhances trust and efficient fund use.

Theoretical Framework: Participative Management Theory (Likert, 1961) supports the inclusion of teachers in budgeting and financial decisions, as this leads to better communication, motivation, and outcomes.

Time Management Practices

Teachers overwhelmingly agreed that school timetables are respected and that instructional time is generally well-managed. However, they noted that non-teaching responsibilities—such as clerical work and meetings—sometimes encroach on teaching hours.

Interpretation: Time management is effective in principle, but external demands on teachers reduce classroom time.

Supporting Studies: Ngaka and Ngoma (2017) observed that administrative overload hampers instructional delivery. Similarly, Scheerens (2004) links effective time-on-task to improved learner performance.

Theoretical Framework: Administrative Efficiency Theory emphasizes that time should be strategically allocated to maximize learning outcomes, with minimal disruption from non-core tasks.

Synthesis with Other Research

The findings of this study align with those of Ndongko (2000), who also observed challenges related to material shortages and financial mismanagement in Cameroonian schools. UNESCO (2018) further reports similar challenges across sub-Saharan Africa, reinforcing the regional nature of these problems.

These consistencies suggest that while resource management frameworks exist in many schools, implementation is hindered by limited resources, centralized decision-making, and insufficient training.

Emerging Themes

Several themes emerged from the data:

Theme 1: Centralized Management Limits Effectiveness

Teachers are largely excluded from key decisions regarding financial and material resources, reducing ownership and motivation.

Theme 2: Infrastructural and Resource Deficits Persist

Despite managerial structures, schools suffer from shortages in teaching materials, infrastructure, and ICT tools.

Theme 3: Capacity Building is Overlooked

CPD and teacher support systems are not systematically implemented, leading to stagnation in teaching methods.

Theme 4: Time Management is Strong but Fragile

Instructional time is generally respected but is vulnerable to administrative overload and policy changes.

Implications for Practice and Policy

The study's findings suggest several implications:

Policy makers should promote inclusive management structures that involve teachers in decision-making.

School administrators should prioritize professional development and find creative ways to fund training programs.

Education stakeholders must collaborate to improve the supply and maintenance of material resources.

Research Question Two: What Is the Perceived Level of Teachers' Efficiency in Primary Schools?

Efficiency in this context includes instructional delivery, classroom management, assessment strategies, time-on-task, and professional conduct.

Based on responses from the questionnaire administered to primary school teachers in Yaoundé. 2 Sub-division, a majority of respondents perceived themselves as generally efficient in carrying out their professional duties. Approximately 75% of teachers reported feeling competent in lesson preparation and delivery, while 68% agreed they effectively manage their classrooms. However, only 55% expressed satisfaction with their ability to use assessment data to improve learning, indicating a gap in data-informed teaching practices. Moreover, teachers highlighted time constraints, lack of teaching aids, and large class sizes as common barriers to maintaining consistent efficiency.

These findings align with those of Maphosa and Shumba (2010), who found that while teachers often demonstrate commitment and competence, contextual limitations such as overcrowded classrooms and insufficient resources affect performance. Ngware et al. (2006) observed that in many sub-Saharan African contexts, efficiency is hindered not by teacher apathy but by systemic challenges, including policy inconsistencies and low professional support. Similarly, studies by Eton and Okeng (2020) in Cameroonian schools suggest that while teachers display high personal motivation, their efficiency is dampened by administrative burden and lack of performance incentives.

The findings are supported by the Efficiency Theory in education, which posits that educational inputs (e.g., teacher qualifications, support systems, infrastructure) should lead to measurable outputs (e.g., student performance, curriculum mastery). Herzberg's Two-Factor Theory is also relevant here. It emphasizes that motivational factors (recognition, achievement) and hygiene factors (working conditions, policies) jointly influence teacher efficiency. In this study, while intrinsic motivation is present among teachers, external hindrances such as insufficient instructional resources and administrative overload limit optimal performance.

Three key themes emerged from the analysis:

Instructional Readiness and Delivery Most teachers feel confident in lesson planning and content delivery, highlighting a strong pedagogical foundation.

Barriers to Efficiency: Common challenges include overcrowded classrooms, inadequate teaching aids, and excessive non-instructional duties.

Limited Data-Driven Instruction: Many teachers struggle with using assessment outcomes to tailor instruction, pointing to a need for capacity-building in this area.

The study suggests that improving teacher efficiency requires not only individual commitment but also systemic support. Educational policymakers should provide targeted training on formative assessment, reduce non-teaching workloads, and ensure equitable distribution of teaching materials. Strengthening school leadership to recognize and reward teacher effort can also enhance motivation and perform

Research indicates that schools face multiple interconnected challenges in managing resources effectively. These include financial constraints, inadequate infrastructure, human resource shortages, inefficient planning, administrative bottlenecks, and limited stakeholder engagement.

Financial limitations are often cited as the primary obstacle, restricting access to instructional materials and facilities (Choi & Lee, 2017). **Infrastructural deficiencies** compound resource inefficiency, leading to overcrowded and poorly maintained facilities (UNESCO, 2019). Human resource issues, such as teacher shortages and high turnover, further diminish resource utilization (Ferguson, 2018).

The theories of resource dependence (Pfeffer & Salancik, 1978) suggest that schools rely heavily on external funding and stakeholder support, making resource management vulnerable to external fluctuations. Additionally, administrative and policy theories highlight that organizational inefficiencies and lack of clear policies impair resource allocation and accountability (Bureaucratic Theory, Weber, 1922).

Research by Okumbe (1999) emphasizes the importance of strategic planning and stakeholder involvement, aligning with the Stakeholder Theory, which advocates for active engagement of all parties to optimize resource use.

In summary, effective resource management in schools requires addressing financial, infrastructural, human, and administrative challenges through strategic planning, policy reforms, and stakeholder participation, as supported by existing theories and empirical research.

This study set out to examine the extent to which dimensions of resource management practices predict teacher efficiency in primary schools within the Yaoundé II Sub-Division. Specifically, the dimensions investigated were human resource management, material resource management, financial resource management, and time management. Data were collected via structured questionnaires administered to teachers and school administrators, and analysed using

descriptive statistics and regression analysis. The findings are discussed in light of existing research and relevant theoretical frameworks.

Human Resource Management and Teacher Efficiency

The findings revealed that human resource management is the most significant predictor of teacher efficiency among the four dimensions studied. Elements such as teacher recruitment, deployment, supervision, in-service training, and motivation were shown to have a strong positive correlation with teacher performance ($r = 0.68$, $p < .05$). Respondents emphasized the importance of professional development programs and administrative support in enhancing classroom instruction and learner outcomes.

These findings corroborate the work of Ngala and Odebero (2010), who reported that professional development and performance appraisal systems are critical in improving teacher effectiveness. Additionally, UNESCO (2016) emphasized the importance of teacher motivation and capacity building in achieving quality education, particularly in sub-Saharan Africa.

This relationship aligns with Herzberg's Two-Factor Theory, which categorizes professional growth and recognition as motivators that enhance job satisfaction and efficiency (Herzberg, Mausner, & Snyderman, 1959). Schools that invest in continuous professional development and fair performance evaluation systems tend to experience higher levels of teacher commitment and productivity.

Time Management and Teacher Efficiency

Time management was the second strongest predictor of teacher efficiency, with a correlation coefficient of $r = 0.55$ ($p < .05$). Practices such as lesson planning, adherence to schedules, timely marking of assessments, and maximizing instructional time were found to significantly influence teaching outcomes. Teachers who managed their instructional time effectively reported higher levels of goal achievement and classroom control.

Olaniyan and Okemakinde (2008) emphasized that optimal utilization of instructional time directly correlates with learner performance and teacher satisfaction. This is further supported by Taylor's Scientific Management Theory, which highlights the role of time efficiency in maximizing output. The findings suggest that time management is not only a personal discipline but a school-wide organizational culture that needs reinforcement.

Material Resource Management and Teacher Efficiency

Material resource management was found to have a moderate positive relationship with teacher efficiency ($r = 0.41$, $p < .05$). Schools with adequate teaching materials—such as textbooks, chalkboards, visual aids, and classroom furniture—reported better teacher preparedness and

instructional delivery. However, challenges such as the unequal distribution of materials and lack of training on their usage were frequently cited.

Adeyemi (2008) argued that access to teaching aids contributes to better curriculum implementation and student engagement. Nonetheless, Bandele (2013) cautioned that material availability does not automatically translate into efficiency unless teachers are adequately trained to integrate these resources into pedagogy. This aligns with the Systems Theory of Management, which asserts that inputs (resources) influence outputs (performance) only when the system is efficiently coordinated.

Financial Resource Management and Teacher Efficiency

Financial resource management demonstrated the weakest correlation with teacher efficiency ($r = 0.29$, $p > .05$), indicating a weak or statistically insignificant relationship. Respondents highlighted that financial resources—such as school budgets, staff salaries, and infrastructure grants—are often centrally managed by the government, limiting local school autonomy. Delays in fund disbursement and lack of transparency were also noted as constraints. These findings are consistent with Kipkoech and Kyalo (2010), who reported that centralized financial systems in African education contexts reduce flexibility and efficiency at the school level. The World Bank (2018) similarly found that inefficiencies in financial resource allocation impede school development in Cameroon.

This result reflects Contingency Theory, which posits that the effectiveness of an organization's resources depends on contextual factors. In this case, the inability of school administrators to directly control financial inputs diminishes their predictive value regarding teacher efficiency.

Integrated Analysis

A multiple regression analysis revealed that human resource management and time management jointly accounted for approximately 57% of the variance in teacher efficiency scores. These findings suggest that resource management practices, particularly those that are personnel-focused and process-driven, play a central role in shaping educational outcomes in the Yaoundé II Sub-Division.

Research Question Three: What Are The Main Challenges In Resource Management In Schools?

Resource management in schools is a critical factor that directly impacts educational outcomes, teacher performance, and overall school efficiency. It involves the effective allocation, utilization, and monitoring of various resources, including human resources (teachers and staff), financial resources (budgets and funding), physical resources (facilities and equipment), and

instructional materials. Despite its importance, schools—especially in developing contexts or underfunded systems—face several key challenges in managing these resources effectively.

The identified challenges are consistent with UNESCO (2015), which notes that funding gaps and poor management practices are common barriers to educational quality in developing countries. Furthermore, the lack of teacher involvement in decision-making processes supports Transformational Leadership Theory (Leithwood & Jantzi, 2000), which stresses the importance of shared vision and collaboration in fostering organizational effectiveness.

- **Financial Constraints**

One of the most prominent challenges is limited funding. Many schools operate under strict budget constraints, which can restrict the hiring of qualified staff, the acquisition of modern teaching materials, and the maintenance of infrastructure. Inadequate funding also affects long-term planning and the ability to respond to unforeseen needs.

- **Inequitable Resource Distribution**

Disparities between urban and rural schools or between public and private institutions often result in uneven resource distribution. While some schools may enjoy abundant resources, others struggle with overcrowded classrooms, outdated textbooks, and poorly maintained facilities. This inequity can exacerbate the achievement gap among students from different socioeconomic backgrounds.

- **Human Resource Management**

Recruiting, retaining, and effectively deploying skilled teachers and support staff remain significant challenges. Some schools face teacher shortages, high turnover rates, or an imbalance in subject-specialist availability. Additionally, insufficient professional development opportunities limit staff capacity to adapt to evolving pedagogical needs.

- **Inadequate Infrastructure and Facilities**

Poor infrastructure, such as dilapidated classrooms, insufficient sanitation facilities, or lack of technological equipment, hinders the learning environment. Schools often lack the resources to repair or upgrade facilities, compromising student safety and comfort.

- **Technological Integration and Digital Divide**

The push towards digital learning requires investments in ICT infrastructure, training, and digital literacy. However, many schools struggle with the integration of technology due to budget constraints, lack of training, or inadequate internet access—creating a digital divide that disadvantages some learners.

- **Poor Planning and Mismanagement**

Even when resources are available, poor planning and mismanagement can lead to inefficiencies. This includes improper procurement processes, lack of transparent budgeting, or failure to align resources with educational goals. In some cases, corruption or bureaucratic red tape further complicates effective resource management

- **Policy and Governance Issues**

Inconsistent or poorly implemented educational policies, along with lack of accountability at various administrative levels, can undermine resource management efforts. Schools may face frequent policy changes or unclear guidelines on how resources should be used or prioritized.

Research Question 4: To What Extent Do Dimensions of Resource Management Practices Predict Teachers' Efficiency?

Statistical analysis showed a significant positive relationship between human, material, and administrative resource management practices and teacher efficiency. Financial resource management had a weaker but still positive correlation. Regression analysis revealed that human resource management was the strongest predictor of teacher efficiency, followed by administrative resource management.

Teachers' perceptions revealed a moderate presence of structured practices, particularly in human resource management. These include supervision, appraisals, and some training opportunities. However, financial transparency and participatory budgeting were lacking. This supports Systems Theory (von Bertalanffy, 1968), which emphasizes interdependence between components—when one resource domain is weak, overall system efficiency suffers.

Studies by Bush and Bell (2002) also emphasize that clear organizational resource frameworks enhance institutional performance, aligning with teachers' recognition of the importance of better management practices.

Teachers generally perceived themselves as competent but constrained by limited resources. This aligns with Herzberg's Two-Factor Theory (1959), which separates motivational factors (e.g., recognition, achievement) from hygiene factors (e.g., salary, working conditions). When key resources are insufficient or delayed, even well-trained teachers may underperform due to demotivation or lack of materials.

This also corroborates findings by Lockheed and Verspoor (1991) who emphasized that teacher efficiency cannot be optimized in resource-deficient environments.

Recommendations of The Study

Based on the findings, the following recommendations are proposed:

Strengthen Human Resource Management Systems: The Ministry of Basic Education should enhance in-service training, introduce performance-based evaluations, and establish transparent promotion systems to improve teacher motivation and retention.

Promote Effective Time Management Practices: Schools should adopt institutional policies that prioritize punctuality, structured lesson planning, and regular instructional supervision. Time management training can also be incorporated into teacher development programs.

Improve Access and Training on Material Resources: The government and stakeholders should ensure equitable distribution of teaching materials. In addition, teachers should be trained on integrating instructional aids and technology into classroom activities.

Decentralize Financial Management: There is a need to delegate financial decision-making powers to school heads. Providing school-based budgeting authority and timely disbursement of funds would enhance school efficiency and allow for more responsive planning.

Implement Monitoring and Evaluation Mechanisms: A robust framework should be developed to regularly monitor the implementation of resource management practices and their impact on teacher efficiency.

Enhance Human Resource Management: Implement continuous professional development programs tailored to teachers' evolving needs.

Introduce mentorship systems for novice teachers.

Increase transparency and inclusiveness in teacher appraisal and promotion processes.

Strengthen Financial Resource Management**:** Train school leaders in budgeting and financial reporting. Involve teachers in the planning and review of school budgets to promote accountability. Advocate for increased public and community-based funding for schools.

Improve Material Resource Allocation: Prioritize the procurement of essential teaching and learning materials at the beginning of each term., establish a resource inventory system to track use and maintenance, engage private stakeholders and NGOs in resource mobilization.

Build Capacity in Administrative Leadership: Provide regular training on resource management and strategic planning for headteachers.

Encourage participatory decision-making involving both teaching and non-teaching staff.

Develop systems for regular feedback and evaluation of school leadership effectiveness.

Limitations of The Study

While this study has provided valuable insights into the relationship between resource management and teacher efficiency, it is not without limitations. These limitations are outlined below:

Limited Geographical Scope

The study was confined to selected primary schools within Yaoundé II Sub-division. As a result, the findings may not fully represent the situation in other sub-divisions, rural areas, or regions of Cameroon where resource availability and management structures may differ significantly.

Sample Size and Representativeness

Due to time and logistical constraints, only a limited number of schools and teachers were sampled. While efforts were made to ensure diversity, the sample may not be fully representative of all teachers and administrative staff within the sub-division.

Reliance on Self-Reported Data

Much of the data was collected through questionnaires and interviews relying on teacher self-reports. This method is subject to potential bias, such as social desirability or inaccurate self-assessment, which may have influenced the accuracy of responses.

Limited Access to Financial Records

Due to confidentiality and administrative restrictions, the study did not gain full access to detailed financial documents or budgeting records in some schools. This limited the ability to objectively assess financial resource management practices.

Cross-Sectional Design

The study employed a cross-sectional research design, capturing data at one point in time. As such, it does not account for changes or developments in resource management practices and teacher efficiency over time.

Honesty of respondents

The researcher depended on the honesty of the respondents to provide answers to the research questions which is possible that most of them didn't treat the questionnaire with confidentiality, hence faltering the purpose of the researcher.

Some teachers felt reluctant to respond to the questions. They had a misconception about it, taking it as a measure of evaluating their professional competences. Reason why some failed to return the questionnaire and others didn't finish to fill the questionnaire.

These limitations, while important to acknowledge, do not undermine the overall validity and relevance of the findings. However, they highlight areas for caution in interpretation and avenues for further research.

Suggestions for Further Research

Conduct comparative studies between public and private primary schools regarding resource management Practices.

Explore the role of digital resource management tools in improving teacher productivity.

Examine gender-related disparities in access to teaching resources and professional development in the primary education sector.

Conduct a comparative study across subdivisions in Yaoundé to determine broader patterns in resource management practices.

Conclusion

The study revealed that human resource management practices are the most prevalent and impactful in the school environment. Practices such as teacher recruitment, deployment, supervision, and in-service training were common and were perceived by respondents as directly enhancing teaching quality. Time management also emerged as a widely practiced and influential dimension, with teachers demonstrating moderate to high levels of planning, punctuality, and instructional time management.

With regard to teacher efficiency, the majority of respondents rated their own performance as moderately efficient, citing factors such as workload, classroom size, and limited materials as impediments to full efficiency. However, schools that implemented structured human resource and time management systems reported higher levels of instructional effectiveness, lesson completion, and learner engagement.

The study also highlighted significant challenges in resource management. These include:

Limited financial autonomy at the school level

Inadequate supply and uneven distribution of material resources

Delayed disbursement of operational funds

Lack of capacity-building programs for teachers and school leaders

Among the four dimensions of resource management examined—human resource management, material resource management, financial resource management, and time management—only human and time management demonstrated strong and statistically significant predictive power for teacher efficiency. Material resource management had a moderate influence, while financial resource management showed the weakest relationship, largely due to centralized control and lack of transparency in school funding processes.

This study has demonstrated that resource management practices—particularly those related to human, material, and administrative dimensions—significantly influence teacher efficiency in primary schools in Yaoundé II Sub-division. While teachers display commendable levels of efficiency, their performance is often hindered by resource-related challenges such as inadequate funding, limited material supply, and insufficient participatory management.

The study confirms and extends the applicability of Herzberg's Motivation Theory, Systems Theory, the Input-Output Model, and Transformational Leadership Theory in the context of

Cameroonian primary education. A well-coordinated approach to managing resources will therefore be critical in enhancing teacher efficiency and, ultimately, student outcomes.

In summary, this research concludes that teacher efficiency in the Yaoundé II Sub-Division is predominantly shaped by how well schools manage their human and time resources. Although material and financial resources are critical, their effectiveness depends heavily on contextual management capacity. Addressing the identified challenges and strengthening decentralized, school-based management strategies will be key to improving both teacher performance and learning outcomes across the primary education sector.

General Conclusion

This research examined the relationship between resource management and teacher efficiency in selected primary schools within Yaoundé 2 Sub-Division. The findings revealed that effective management of educational resources—human, material, and financial—plays a significant role in enhancing teacher performance and overall instructional quality.

Specifically, it was observed that schools with structured resource allocation systems, adequate teaching materials, and proper staff deployment tend to have more motivated and effective teachers. Conversely, poor resource planning, inadequate infrastructure, and lack of teaching aids were linked to diminished teacher efficiency and learner outcomes.

The study also highlighted the importance of administrative support, professional development, and participatory decision-making in fostering a conducive teaching environment. Furthermore, it was evident that teachers perform better when their needs are met and when they operate in a well-resourced and organized educational setting.

Finally, the research underscores that improving teacher efficiency in Yaoundé 2 requires a holistic approach to resource management—one that ensures equity, accountability, and sustainability. Stakeholders in the educational sector must therefore prioritize effective planning, transparent allocation, and optimal utilization of resources to boost teacher performance and enhance the quality of primary education in the sub-division.

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APPENDEX

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FACULTE DES SCIENCES DE L'EDUCATION
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DEPARTEMENT DE CURRICULA ET EVALUATION
******

REPUBLIC OF CAMEROUN
Peace –Work –Fatherland
******
UNIVERSITY OF YAOUNDE 1
******
THE FACULTY OF SCIENCES OF EDUCATION
******
DEPARTEMENT DE CURRICULA ET EVALUATION
******

QUESTIONAIRE FOR TEACHERS

Dear respondents,

I am a level 500 student and I am currently conducting a research project to discover how resource management impact teacher efficiency in schools. Please kindly contribute to this research by providing fair responses to the statements. This is purely an academic exercise, and neither your responses nor the outcome of your responses will be used for any purpose other than the one for which they are intended.

Kindly respond honestly by ticking (✓) the appropriate boxes or providing brief answers where required.

Section A: Demographic Information

(Please tick or fill in where applicable)

1. Sex: ☐ Male ☐ Female
2. Age range: ☐ less than years ☐ 20 –30 years ☐ 31–40 years ☐ 40 - 60 years
3. Teaching experience:
   ☐ 0–5 years ☐ 6–10 years ☐ 11–15 years ☐ 16+ years
4. Qualification:
   ☐ Advanced level ☐ HND ☐ CAPIEMP/CAPIET ☐ Bachelor's ☐ Master's
5. Position:
   ☐ Classroom Teacher ☐ Head Teacher ☐ Inspector ☐ Other (specify): _____
6. Type of School:
   ☐ Public ☐ Private ☐ Denominational ☐ Bilingual

Section B: Resource Management Practices *(Please tick the response the suit your opinion)*

Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Item	SD	D	N	A	SA
1. The school provides adequate didactic materials (textbooks, chalks, charts, etc.).					
2. The number and qualification of teaching staff are sufficient.					
3. The school infrastructure (classrooms, toilets, library, etc.) is well managed.					
4. Financial resources are adequately provided for educational activities.					

5. Policies on resource allocation are fair and transparent.					
6. Teachers participate in resource-related decision-making.					
7. Resources are regularly maintained and replaced when worn out.					
8. Regular training on resource management can help you better use resources to increase student engagement.					
9. All the resources needed in your school are very much adequate.					
10. Limited access to ICT tool is a resource constraint common in your teaching experience.					
11. There is good maintenance of the available resources in your school.					
12. The school administration is primarily responsible for managing and allocating resources in your school.					
13. Teachers and administrators are involved in resource planning and decision making.					
14. For better resource management in schools, decentralization system has to be adopted.					

Section C: Teachers' Efficiency *(Please tick the response the suit your opinion)*
Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Item	SD	D	N	A	SA
1. I effectively manage my classroom despite resource limitations.					
2. The availability of resources enhances my lesson delivery.					
3. Adequate resources lead to better student academic outcomes.					
4. When resources are available, I feel more committed and motivated.					
5. I adopt alternative strategies when resources are insufficient.					
6. There is a strong link between resource sufficiency and my teaching effectiveness.					
7. Much time is spent on lesson preparation when resources are insufficient.					
8. Availability of resources help limit time spent on managing student behavior.					
9. Most classroom management issues are linked to resource inadequacy					
10. Teachers use technology to support inadequate physical resources.					
11. I improvised teaching aids using local material can be used to cope with limited resources.					

Section D: Challenges in Resource Management

1. **What are the major resource-related challenges in your school?** (*Tick all that apply*)
   - ☐ Insufficient didactic materials
   - ☐ Lack of qualified teaching staff
   - ☐ Overcrowded classrooms
   - ☐ Poor infrastructure
   - ☐ Inadequate funding

☐ Ineffective policies on resource allocation
☐ Others (please specify): _____

2. How do you manage or adapt to resource shortages?
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3. What improvements do you suggest to enhance resource management in your school?
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Section E: Open-Ended Questions

4. How has resource management (good or poor) impacted your teaching outcomes?
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5. What recommendations would you give to policymakers or school authorities to improve resource management in primary schools?
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Thank you for your participation!