**THE EFFECTS OF SCHOOL RESOURCE ALLOCATION ON STUDENT PERFORMANCE: A CASE OF KABWE DISTRICT SECONDARY SCHOOLS**

By

**MILIMO ALLAN CHONGO**

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SUPERVISOR: **DR. SIDNEY KAWIMBE**

# DECLARATION

At this moment, I solemnly declare that this dissertation represents my work, and that it has previously not been submitted for a master's degree or other qualification at this or any other University.

Signed…………………………………………………………………………………………………………

CANDIDATE

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# ABSTRACT

Schools should formulate reasonable objectives and provide students with a proper learning environment. They should offer students balanced learning opportunities in all aspects of development, i.e moral, intellectual, physical, social, and aesthetic as well as nurture them to be responsible citizens. Therefore, resources have to be mobilized and allocated fairly so as to achieve the above stated roles of schools. Resources have to be allocated equitably to all schools for us to achieve the best results from a school as a society or a country at large.

The study was focused on determining if the resources allocated to schools have any effects on students' performance with a special focus on Kabwe District Secondary Schools. The study was both descriptive and causal in design. The study utilized primary data from the field and already processed secondary data by other authors. Questionnaires were used to obtain Primary data from these schools. The study used purposive sampling in choosing the appropriate sample size where homogeneous sampling was used to choose schools that may have the best information regarding resource allocation and student performance from Kabwe. SPSS and MS excel was used to analyze the data which was collected from the field.

The study established that schools lack enough resources to support the conducive learning environments to significantly influence the performance of the learners in schools. The study also found that there has been an erratic funding in the past five years in as far as providing necessary resources to schools is concerned. It was also established that schools had not much powers in as far as allocation or sourcing of resources was concerned. In addition, most schools were not doing enough in using the little resources that were available and formulating strategies that maximises the use of little resources at their exposal.

In light of the above, the government, through the ministry of education should strive to provide enough funding to all schools for them to be able to significantly influence the performance of the learners. The schools should also be resourceful and look for resources to cushion the erratic funding from the central government. Schools should have a say or powers in the allocation of resources, they must be consulted adequately so as to have a clear view on how best to allocate the available resources. Most importantly, the schools should prudently use the allocated resources to them so as to improve student performance.

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**CHAPTER ONE: Introduction**

### 1.1 Background

Concurring to HTTPS: www.dictionary.com, education is the "discipline concerned with instructing and learning strategies in schools or school-like situations, as contradicted to different nonformal and casual implies of socialisation". It encourages states that it is the act of preparation of giving standard information, creating the powers of thinking and judgment and by and considerable planning oneself or others learned people for developing life. The living benchmarks in a community are all reflections of the education framework advertised in that zone—the transmission of information era by a given society to decide its pace and course of instruction. Instruction will continuously plan a specific period to manage that area's needs and challenges, making them more adaptable and imaginative to bargain with fundamental issues inside that range or worldwide.

A nation like Zambia needs a distant better; a much better; a higher; a more robust; an improved">a distant better instruction framework to assist its citizens adapt to the current unusual social patterns. With instruction, one is prepared with the abilities to basically and positively examine issues that one may confront. Citizens must be given quality instruction to assist them to meet the over declarations. Be that as it may, there is a continuous wrangle about the regulation plans and resource administration approximately instruction change. Approach activities are progressively persuaded by a craving to guarantee those instructive resources to be composed, overseen, and viably utilised so that schools can convey way better results for children. Specifically, the connection between different resources and progressed instructive results is petulant (Krueger, 2003). Without steady proof of the adequacy of expanded resource levels, intrigued is developing in finding out how increments in resources will raise scholastic accomplishment in a school setup.

It is against this foundation that the analyst needs to decide if the sums of resources apportioned to schools within the Kabwe district influence students' execution. An arrangement of compelling surveys of this writing has proposed no precise connection between asset inputs and school results amid later past a long time. Be that as it may, another consideration was conducted to reanalyse the previous reviews' information, utilising more advanced blend strategies. It appeared to be orderly positive relations between resource inputs and school results. Besides, investigations of the greatness of these relations proposed that the central concern (relapse coefficient) was substantial sufficient to be of down to earth significance. In comparison, this reanalysis recommended that past information did not back the conclusions that Hanushek and others inferred from it, impediments of their information set fitting caution in utilising it for arrangement.

## 1.2 Research Problem

Agreeing to the Examination Council of Zambia, a body built up beneath the Examination Council of Zambia Act of 1983 to set and conduct examinations and grant certificates to effective candidates, states that the results within Kabwe district have been destitute for the past five a long time. Unfortunately, there have been mixed feelings regarding the causes of poor performance in Secondary Schools of Kabwe District. There are speculations as to what could be the problem leading to such poor performance. Several factors include a bulky syllabus, poor background in learning, inadequate resources (human and material) and teaching methodologies used, teacher qualifications, lack of books and equipment, school infrastructure, teacher incentives.

Institutional resources and finance issues are of great concern to all levels of the education system in Zambia. Indeed, as stated earlier on, every child's future and the future of a given society, in general, depend primarily on the quality of the education system. Then, a significant concern is understanding the connection between resource allocation and student performance. As expectations rise for students and teachers to perform at high levels and for schools to guarantee the success of all students, the question of how best to support this reform through the effective and efficient allocation of resources becomes even more critical. Research efforts in recent decades have helped broaden our understanding of the role of school resource allocation in student outcomes and how their distribution and use might be improved. However, the relationship between resources and student performance is not yet apparent.

The performance in Kabwe district schools has been poor for the past 5 years where the failure mark, always has the highest percentage. This is so, despite measures put in place to improve academic performance of learners. There are, competitions conducted in and among schools, quizzes, jets innovations and so on and so forth. All these are done with a view to improving results and academic performance among learners in schools. It is against this background that the researcher sought to verify whether improved resource allocation in schools would bring about good performance of learners academically.

### 1.3 Research Aim, Questions and Objectives

### 1.3.1 Research Aim

The main aim of the study is to investigate the effect school resource allocation on student Performance.

### 1.3.2 Research Questions

The following research questions were employed in this study;

I.    Is there a significant relationship between teacher pupil ratio and student performance?

II.    What is the association between teacher education and student performance?

III.    What is the correlation between learning materials and student performance?

IV.    What is the combined effect of resource allocation on student performance?

### 1.3.3 Research Objectives

The following are the specific Objectives for the study:

I.    To find out if there is relationship between teacher pupil ratio and student performance.

II.    To examine the association between teacher education and student performance.

III.    To investigate the correlation between learning materials and student performance.

IV.    To establish the combined effect of resource allocation on student performance.

### 1.3.4  Research Hypothesis

$H_1$: There is significant relationship between teacher pupil ratio and student performance.

$H_2$: There is a positive relationship between teacher education and student performance.

$H_3$: There is a strong correlation between learning materials and student performance.

$H_4$: There is a combined effect of resource allocation on student performance.

### 1.4 Explanatory variables and dependent variables

The study was guided by the explanatory variables (X) and dependent variables (Y). The independent variables of the study (X) included teacher pupil ratio, teacher education, learning materials, while student performance was the dependent variable (Y).

### 1.5 Research Contributions

This study was significant and contributed to the economy at large in the following ways:

i.    The study has made the policymakers and schools in particular with an understanding and analysing the relationship between student performance and the allocation of school resources in order to improve student performance.

ii. The study has provided additional literature on prior studies on examining the relationship between resource allocation and student performance.

iii. The study is resourceful to many researchers, scholars or academicians for further researcher studies on the relationship between resource allocation in schools and student performance.

iv. In addition, some of the findings of this study will assist in narrowing the knowledge gaps in Zambian literature for decision making and policy development in as far as allocation of resources in schools and student performance is concerned.

## 1.6 Overview of Research Design

This segment gives a sharp intuition of the investigation strategy, investigate plan, inquire about the approach, information collection devices and examination methods used within the study. The point by point clarification was inspected in chapter three when talking about the investigation strategy.

### 1.6.1 Research approach and method

The investigation received a deductive approach that secures data that decides what exists concerning variables. A study research plan was connected to a survey of how the autonomous factors impact the varieties of the subordinate variable over time.

### 1.6.2 Data Collection and Analysis Techniques

The research was limited to data collected from 12 reliable schools selected from Kabwe district schools, Central Provincial Education Office and Kabwe District Education Board Secretary's Office through questionnaires. The researcher invited all the set up secondary Schools within the Area of Kabwe. A letter was sent to each school headteacher, clarifying the study and asking for school cooperation. The analyst made follow-ups without further ado after the letters were sent.

## 1.7 Dissertation Layout

This report has five chapters. The introductory chapter displayed the presentation that reflects the foundation of the study, issue explanation, investigate questions, goals and speculation, research commitment, paper format and the chapter outline. The second chapter dealt with a literature review comprised of hypothetical and observational literature. The investigation strategy and design were dealt with within the third chapter. In the fourth chapter, data investigation, introduction and translation were taken care of. At last, the fifth chapter made the conclusion, suggestions and future investigation suggestions.

### 1.8 Chapter Summary

This chapter is the introduction to this study. It reviews the background of the study the existing gaps in the literature concerning the relationship between resource allocation and student performance with a specific focus on Kabwe district schools in Central Province. In addition, the chapter introduced some of the ways that the government can use to improve student performance concerning resource allocation. The problem statement was produced from existing gaps of information in Zambian writing. The investigation questions, goals and Theory were highlighted, taken after by a few contributions that this study will back policy and choices. In expansion, the chapter briefly displayed the investigation plan by bringing to light the inquiry about approaches, strategies, information collection and examination methods used to conduct this.

<h1 style="text-align:center">CHAPTER TWO: Literature Review</h1>

## 2.1 Introduction

This chapter points to clarify the theoretical concepts and empirical reviews significant to this consideration and contained within the literature review of the relationship between resource allocation and student performance.

## 2.2 Key definitions and Concepts

### 2.2.1 Student Performance

This is a mark or score that a learner gets as measured by the Examination Council of Zambia (ECZ) at grade 12 results level which should be a credit or better in five O levels. According to the ECZ Act no. 15 of 1983 mandates the body to conduct examinations as a means to foster student academic achievement in Zambia.

### 2.2.2 Teacher Pupil Ratio

The number of pupils enrolled in a school divided by the number of teachers at a given school.

### 2.2.3 Teacher Education

The highest competences in professional qualifications attained by a teacher to be able to handle that particular level of learners.

### 2.2.4 Learning Materials

Any collection of materials that a teacher may use in teaching and learning situations to help achieve desired learning objectives.

### 2.2.5 Resources

In this case they mean, teacher pupil ratio, teacher education and learning materials in a school.

## 2.3 Theoretical Review

This section of the investigation surveyed theoretical literature from both distributed and unpublished literature relating to this study and its particular goals. The point of investigating this literature was to communicate the hypothesis with the findings of this inquiry and answer the investigation questions.

The hypothetical premise of this study was to look at the relationship between resource allocation and student performance as measured by the Examination Council of Zambia (ECZ) grade 12 results level. According to the ECZ Act no. 15 of 1983 mandates the body to conduct examinations as a means to foster student academic achievement in Zambia.

Hanushek et al, (2009) claimed that "it is time to perceive that fund framework can be a basic instrument not as it were in paying for required resources and programs (it is currently part)" but moreover in propelling students, instructor, and school directors to discover more successful solutions.

## 2.3.1 Constructivist Theory

Constructivism is a theory of learners developing meaning based upon their past information, convictions, and experiences (Lambert et al., 2002). Constructivism maybe a a hypothesis of information (epistemology) that contends that people create information and meaning through interaction between their encounters and thoughts. Hein (2007) notices that constructivism alludes to the thought that learners develop information for themselves. Each learner exclusively and socially develops meaning as he or she learns. It keeps up that people make or build their claim modern understandings or information through the interaction of what they now know and accept and the thoughts, occasions, and exercises with which they come in contact. Building meaning is learning. There is no other kind of learning other than constructing meaning. Information is obtained through inclusion with substance rather than impersonation or redundancy. Teachers must give the learners the openings to connect with tangible information and develop them possess the world. Constructivism is, in this way, a hypothesis of learning that compares the securing of information to a handle of building or development. Each learner ought to effectively take part in the learning forms as everybody develops his or her possess information. Learning exercises in constructivist settings are characterized by dynamic engagement, request, problem solving, and collaboration with others (Abdal-Haqq 1998). Having more prominent information about the changing learning preparation is key to understanding why constructivism is a successful approach for our society. A progressively prevailing constructivist view centres on the social embeddedness of learning, utilizing the strategies and system of human social studies to look at how learning and cognition are dispersed within the environment instead of put away within the head of a person (Duff 2006). Learning is an active handle of developing instead of securing information, and instruction may be a preparation for supporting that development instead of communicating information (Duffy 2006). Learning, subsequently, is essentially the method of altering our mental models to suit modern encounters (Wilson 1996). Hein (2007) argues that learning is not understanding the 'true' nature of things, nor is it recalling seen culminate thoughts, but maybe and individual and social development of meaning out of the dazing cluster of sensations that have no arrange or structure other than the explanations which we manufacture for them. Instead of the container of information, the instructor may be a direct facilitator and co-explorer who energizes learners to address, challenge and formulate their possess thoughts, conclusions and conclusions. Constructivists keep up that when data is required through transmission

models, it is not continuously well coordinated with earlier information and is frequently gotten to and articulated as it were for formal scholarly events such as examinations. In constructivism, learning is a dynamic, contextualised preparation for developing information instead of procuring it. Concurring to Duffy (2006), learning includes action and a setting, counting the accessibility of data in a few substance spaces. Information is not inactively gotten but effectively built up by the experiential world, not the revelation of ontological reality (Hein 2007).

### 2.3.2 Theory of Academic Performance

The theory of academic performance was created by Elger (2007). The approach accentuates six foundational concepts to make a system that can be utilized to clarify execution and execution advancements. To perform is to create esteemed comes about. An entertainer can be a person or a gather of individuals who locks in a collaborative effort. Creating execution may be a journey, and the level of performance depicts the area of travel. The current execution status depends comprehensively on six components: setting, level of information, level of abilities, level of character, individual members, and settled variables. Three maxims are proposed for commonsense execution enhancements. These include a performer's mentality, inundation in an improving environment, and engagement in smart hone.

### 2.3.3 Relationships between Concepts being studied

We can conclude that resource allocation may be a veritable portion of student performance. It is prescribed that endeavours through an inquiry about ought to be coordinated towards moving forward with the allocation of resources to make strides in student performance. In expansion, the consideration makes a difference get it how the resources can be distributed for the students to perform successfully. It moreover gives technical information for the instructive pioneers and the peruser. It surveyed if the school specialists were achieving the goals and on the off chance that changes were made towards accomplishing authoritative objectives or approaches.

### 2.4 Empirical Studies

Redhwan et al. (2015) inspected a think to decide the relationship between identity sorts and student performance among Malaysia's well-being sciences understudies. A add up several 246 students have taken an interest in this ponder. Information was entered and dissected. The study uncovered that the foremost prevailing identity characteristic was openness and the slightest prevailing was neuroticism. Spearman's relationship examination appeared to a relationship between total review point average and the taking after sorts of identity: openness, scruples, extroversion. The result

showed that openness and honesty identities were related to student performance separately. Openness and honesty identities were found to be related to student performance.

Bayo (2005) opined that smaller classes advantage all the learners since of personal consideration from teachers, but low accomplishing students' advantage more. Student performance in huge classes float off the errand since much instruction from the educator to the entire course rather than person consideration, and more achieving students are most influenced. Classes with as well numerous learners are regularly disturbing to instruction. Too, and innumerable performance in a course come about in an assorted learner field, with shifting learning capacity degrees. Thus, the system will spend more time for less scholastic learners to absorb the data when that time might be superior to advancing through the educational programs. In this way learner-teacher ratios are compelling arguments for advanced or honours classes.

### 2.5 Gaps in the Literature

The hypothetical presence centres on the plain strictness winning in administration select of any anticipated qualities exercises where administration of resource allocation and student performance are the portion of them. This way shapes a sufficient opportunity to fill the holes by guaranteeing more signs concentrate on handling resource allocation and student performance.

An observational survey of writing from various inquiries shows that for a school achieve high student performance, it ought to guarantee that resource allocation is sufficiently designated. Despite this, the resource allocation preparation ought to be effective.

A few researchers or analysts have examined resource allocation and student performance. These studies demonstrated a positive relationship between resource allocation and student performance. In expansion, their discoveries appear that resource allocation broadly impacts varieties in student performance. Unfortunately, not much inquiries about Zambia have been conducted on resource allocation and student performance. Peter Banda (2005) journal article on learning materials in Zambia uncovered that scarce resources play a vital part in conveying these resources against the needs of all schools which are boundless. As a result, the variables of student performance in schools show challenges in resource allocation. Indeed, even though studies demonstrate that there are issues with resource allocation, by and large, the study's concerns are centred on the student performance. Based on this research gap, this investigation evaluates the adequacy of resource allocation on the performance of students.

### 2.6 Conceptual Framework

The framework appears that resource allocation preparation is critical to student performance. Conceptual connections between inquiring about dependent variable (student performance) with free variables which are teacher-pupil ratio, teacher education, and learning materials.

Student performance measured by the grades that a learner obtained at grade 12 level as measured or prescribed by the examination council of Zambia (ECZ). The resource capacity determines the capital structure of the schools in terms of teacher-pupil ratio, teacher education, learning materials while the budget constraint are the challenges the central government encounter in allocating resource to schools and other areas. The variables will be operationalized and mathematically measured using the analytical model in chapter three. The study expects positive correlation in the resource allocation against the performance of pupils.

*Figure 1Independent Variables and Dependent Variable*



Source:  Created by the Researcher
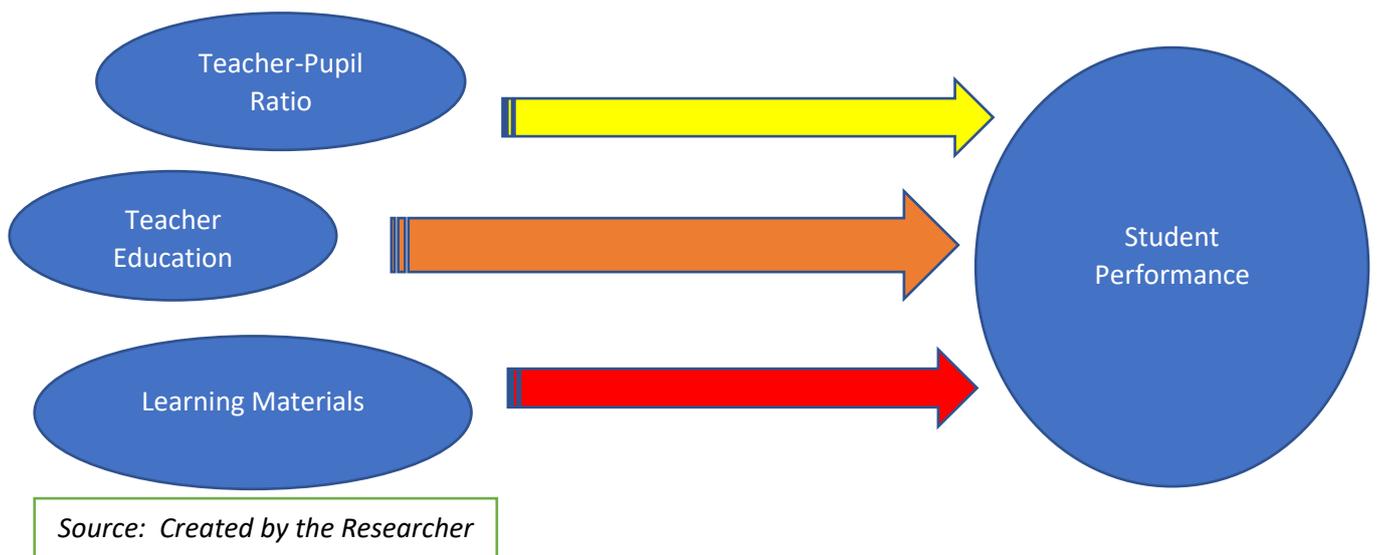
### 2.7 Chapter Summary

The chapter revealed the various studies that have been done to emphasize the significance of resource allocation on student performance among the schools. This study showed a few definitions and speculations supporting the concept of resource allocation and student performance.  The consider affirmed that in case the government allocated resources evenhandedly and inreased, students performance would be improved.

# CHAPTER THREE: Research Design and Methodology

## 3.1 Introduction

The previous chapter provided literature on resource allocation and student performance in schools, the study's conceptual framework and concluded by highlighting the hypotheses statements of the study. This chapter examines the methodological methods utilised in collecting data and the steps and techniques embraced in planning the data and conducting the statistical examinations.

## 3.2 Theoretical Framework of Methodology

### 3.2.1 Research Paradigm/Philosophy

Willis (2007:8) defines a research paradigm as "a comprehensive belief system, worldview or framework that guides research and practice in a field". Hence, each time a researcher plans a study, it is essential to think through the philosophical worldview presumptions they bring to the study. This is because the research design will be related to this paradigm. This study adopted the postpositivist paradigm. This paradigm was embraced in this study since positivistic requests clarify, foresee or control reality. Encourage, it endeavours towards measurability, objectivity and lessening of instability. It too employments standardised methods that can be copied.

### 3.2.2 Research Approach

Since our paradigm in the study is postpositivist, the research approach taken was deductive in nature. Deductive reasoning simply means drawing conclusions or inferences based on widely acceptable facts. This simply means testing existing theories. Under this approach a researcher having read through the literature and theories related to the study will design the conceptual framework to show how the variables are related in the study. The researcher then formulates hypothesizes to test those existing theories, collects data to test the formulated hypothesis and after that analyze the data. Results will either support or verify or refute the existing theory and then inferences will be made based on the results obtained from the respondents.

### 3.2.3 Time Horizon

This refers to the time frame that it took to undertake the research. The time horizon of this study is best described as cross sectional or short-term study. This meant that the data was collected at only one specific point in time. This however does not mean that the researcher collected the data in one day but that the data was collected in a space of days by paying the 12 different school in Kabwe district a visit in order give out the self-administered questionnaire.

### 3.2.4 Research Strategy

The general map of how the study questions were answered is the research design. Meanwhile, according to Saunders et al. (2008), there are three main research design styles: exploratory, informative, and descriptive. Exploratory research is a valuable tool for learning more about what is going on, gaining new perspectives, asking questions, and evaluating phenomena in a new light (Creswell, 2016). Descriptive research aims to provide a complete picture of people, activities, or circumstances. Explanatory research aims to find causal associations between variables (Creswell, 2016). This thesis aimed to attempt and clarify events and circumstances, as well as some issues, to explain or give sense to the relationship that occurs between some variables. This study's design is descriptive and explanatory to determine the connection between resource allocation and student performance. The analysis also used a quantitative research approach, with a questionnaire serving as the primary data collection tool.

## 3.3 Empirical Aspects of Methodology

### 3.3.1 Population Profile

The population refers to the collection of units from which the sample will be drawn. A research population is a set of elements from which sample elements are chosen (Creswell, 2016). The research concentrated on teachers and school managers in secondary schools in Kabwe district.

According to the District Education Board Secretary (DEBS), the population of teachers is 660 spread around in 12 secondary school.

### 3.3.2 Sampling frame and Sample Size Determination

The number of objects chosen from the universe understudy, make up the sample, and the sample size determines how many sampling units should be surveyed and interviewed (Creswell, 2016). The findings of a large sample are more accurate than those of a small sample. If the researcher uses questionnaires, interviews, observation, or other data collection methods, sampling is important. Even if a researcher has access to data from the entire population in some situations, the total expense may prevent this. Sampling allows the researcher to save time while still making data more manageable (Lewis and Saunders 2003). Easy random sampling was used in this analysis. The sample under investigation was supposed to have a satisfactory response rate. The sample size was determined using the formula adapted from Creswell (2016) as follows: $n = \frac{N}{(1+N(e^2))}$

Where n = sample size, N= population e= level of significance = 0.05

$$n = \frac{660}{(1 + 660(0.05^2))}$$

$$n = 249.05 = 250$$

Therefore, this study had a sample size of 250 respondents from different secondary schools in Kabwe.

### 3.3.3. Data Collection Methods

This study utilised both primary and secondary data sources. Preliminary data was collected based on the structured questionnaire administered to the respondents. The questionnaire consisted of closed-ended questions on a 5-point Likert-type scale (strongly disagree, disagree, neither disagree nor agree, agree, strongly agree). Respondents were requested to answer the questions independently and return the questionnaire for data analysis. This research data collection method is quite popular, particularly in the case of inquiries.

### 3.3.4. Data Processing and Analysis

Data examination organises and gives meaning to information (Burns 1993). Data investigation includes analysing, categorising, and summarising data to set up sense and present evidence. The collected information through the surveys was coded, entered and analysed using the SPSS 25.0 package. Exact and inferential measurements were used to analyse the data findings, presented in the frame of tables and charts. Tables and graphs are appropriate since they render it more open to the peruser to recognise the connections between explored factors and help summarise the discoveries. Factual strategies were too utilised within the information investigation. Pearson Bivariate relationship investigation establishes the relationship between the independent variables and the dependent variable. Whereas direct different relapse analysis was used to decide the impact of the free factors on the subordinate variable.

### 3.4 Reliability, Validity and Generalizability of Research Findings.

### 3.4.1 Reliability and Validity

Research reliability and validity are of paramount importance in any study especially when testing factors in any data collection instrument. Very good attention must be taken into consideration to these two key components of a research instrument as it helps to ensure the quality of the data collected.

In order to ensure that the reliability and validity of the research instrument, the constructs used in the questionnaire were adopted from the empirical study done by Neal (2016).

The construct validity of the questionnaire was checked using Exploratory Factor Analysis (EFA) SPSS 25.0 was used in carrying out the factor analysis in order to explore the underlying structure of

the items of the questionnaire. The principle component analysis was used as the method of extraction and this was based on varimax method of rotation. For the purpose of analysis items under each section of the questionnaire had to be transformed in to composite scores depending on they factor loadings and for this reason principle component analysis was used a method of extraction so that we can detect and calculate merged scores for the fundamental factors.

Looking at the questionnaire in the appendix, it's clear that it was divided into 5 distinct sections. The section was not comparable to each other for this reason EFA was done separately for each section of the questionnaire. Correlation matrix were checked to ensure reasonable factorability and that each item correlated with at least one other item with a value of 0.3 and above. Kaiser-Meryer-Olkin (KMO) which is used to check if sample size is good enough for a factor analysis was also examined and the values obtained were all above the recommended value of 0.6 (Field, 2009).Bartlett's test of sphericity in all the sections of the questionnaire confirmed that our study had patterned relationships amongst the variables ($p < .001$).

Jolliffe (1986) recommends retaining of factors with factor loadings of greater than or equal to 0.70. Thus, the results obtained after running EFA for each section of the questionnaire,

5 items that had low factor loadings loading and that did not have factor loadings of 0.70 were eliminated from the computation of composite scores.

After the elimination of the given items above, second EFA in each section of the questionnaire was then conducted. The results did indicate that all the factor loadings for each section and Cronbach alpha were all well above 0.70 and according to Field (2009), the value 0.70 supports a reliable scale. The Cronbach alpha was used to assess the internal consistency of the items under each construct.

*Table 2: Cronbach's Alpha value*

| Section of the Questionnaire | Number of Items | Cronbach's Alpha value |
|---|---|---|
| Teacher pupil ratio | 4 | 0.80 |
| Teacher education | 5 | 0.74 |
| Learning materials | 5 | 0.71 |
| Student Performance | 4 | 0.70 |

**Source: Author (2021).**

### 3.4.2. Generalizability of Research Findings.

Generalizability of the research findings simply means to what extent can your research findings and conclusions from your study on a sample be extended to a larger population. Therefore, in order to have a sound generalizability of results data must be obtained on a larger population. For this study the research findings and conclusions can only be generalized to the secondary schools and teachers in Kabwe district.

### 3.5 Accessibility.

Accessibility to the respondents (teachers) was obtained through DEBS office. Before the researcher could go in the field to collect the data, permission had first to be granted through Kabwe DEBS office. At school level the researcher had to first seek permission from the school head teacher who then gathered the teachers together. The researcher then informed the respondents of their role in the study and why they responses were of paramount importance to this study.

### 3.6 Research Ethical Considerations

During the study, ethical considerations were considered. Each respondent that took part in the study was made aware of the reason and objective of the research and the surveys included. After clarifying the point of the overview, respondents were educated about the researcher's craving to keep their characters and sees confidential before they filled out the survey.

### 3.7 Chapter summary

This chapter depicts the strategy that the research utilised to conduct this study. It displayed the different strategies that the analysis was embraced for research purposes. A few components of the strategy were examined, counting populace, reading strategy and information collection instrument.

## CHAPTER FOUR: Research Findings and Analysis

### 4.1 Introduction

This chapter of the report represents the research findings of the study. In doing so, the presentation

of the results starts with the description of the participants that took part in the study. The description of the participants included their socio-demographic profiles. This is then followed by Correlation analysis which was used to establish the correlation between the variables used in the study. Multiple regression analysis was used to determine the direct and combined effect of the independent variables on the dependent variable. The analysis was done using SPSS 25.0

### 4.2 Demographic Characteristics of Respondents

Table 5.1 below shows the Socio-demographic profile of respondents. As can be seen in the table majority (64%) of the respondents were males, and 36% were females. Again, 51% of the respondents were in the age group of 29-39 years, while 10% were 18-28 years. Those 40 years and above accounted for 39% of the respondents.

It was also noted that out of the 250 respondents in the study, 53% of the respondents had bachelors' degree level of education, 31% of had Diploma level of education and 16% of the respondents has some college certificate level education.

The number of years that respondents have been working for less than a year was reported to be 20 (8% of the respondents). Those who have been working between 1-5 years was found to be 55(22% of the respondents). 175 (70%) respondents have been employed for 6-16 years.

**Table 4.2.1: Socio-demographic Profile of Respondents (n = 250)**

| Explanatory variables | Frequency | Percentage (%) | Cumulative Percentage (%) |
|---|---|---|---|
| *Gender* | | | |
| Male | 160 | 64 | 64 |
| Female | 90 | 36 | 100 |
| *Age of respondent* | | | |
| 18-28 years | 25 | 10 | 10 |
| 29-39 years | 128 | 51 | 61 |
| 40 and Above years | 97 | 39 | 100 |
| *Respondents level of education* | | | |
| College Certificate level of education | 40 | 16 | 16 |

| | | | |
|---|---|---|---|
| Diploma level of education | 77 | 31 | 47 |
| Degree level of education | 133 | 53 | 100 |
| *Respondent Work Experience* | | | |
| Less than a year | 20 | 8 | 8 |
| 1-5 years | 55 | 22 | 30 |
| 6-16 years | 175 | 70 | 100 |

**Source: Field data (2021).**

### 4.2.1 Descriptive Statistics

Table 4.2.3 below presents the descriptive statistics of the variables used in the study and these descriptive statistics include the mean, standard deviation, skewness and kurtosis.

*Table 4.2.3: Descriptive Statistics of the variables in the Study (n =250)*

| Variables | Mean | Std. Deviation | Skewness | | Kurtosis | |
|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| Student performance | 4.1 | .88 | -.721 | .160 | -.409 | .320 |
| Teacher pupil ratio | 4.0 | .92 | -.983 | .160 | .781 | .320 |
| Teacher Education | 4.0 | .90 | -.956 | .160 | -.106 | .320 |
| Learning materials | 3.7 | .92 | -.298 | .160 | -.876 | .320 |

**Source: Author (2021).**

Student performance (mean = 4.1 and standard deviation = .88), teacher pupil ratio (mean = 4.0 and standard deviation = .92), teacher education (mean = 4.0 and standard deviation = .90), learning materials (mean = 3.7 and standard deviation = .92), all these variables reported means above 3.3. This means that the respondents did agree with the items under these four sections in the questionnaire since the means for all the four main sections were reported to be above 3.0.

### 4.2.2 Normality Tests of the data

We examine the columns for Skewness and kurtosis in table 4.2.3 above to check the data's normality. The Skewness and kurtosis are well within a tolerable range (-1.96 and +1.96) for assuming a normal distribution. Regarding Skewness and kurtosis, the data collected appeared to be skewed and kurtotic.

However, this does not differ significantly from normality. (Cramer, 1998, Cramer and Howitt, 2004, Doane and Seward, 2011).

### 4.3. Establishing the relationships between the variables in the study.

Pearson bivariate analysis was used to determine the relationship between teacher-pupil ratio, teacher education, and learning materials as independents variable with the performance of students. In conducting correlation analysis, the following hypothesis was tested:

$H_0$: There is no significant relationship between teacher-pupil ratio, teacher education and learning the materials with students' performance.

$H_1$: There is a significant relationship between teacher-pupil ratio, teacher education, and learning the materials with students' performance.

Using the set standard of interpreting the strength of the relationship by Cohen (1958), the survey results indicate that significant positive relationships exist between the study variables. Correlations of +1 were considered perfect positive linear relationships, and -1 was the perfect negative relationship.

All correlations in the range 0.10-0.29 represented weak associations between the two variables, 0.30 to 0.49 represented a moderate association, and any value about 0.05 or above represented an influential positive association between the two variables. The correlations between the three independent variables and the dependent variable (student performance) were of paramount importance for this study. Thus, the focus of the interpretation of the results is below. Table 4.2.4 below shows the results obtained.

*Table 4.2.4: Results for the bivariate Correlation Analysis (n = 250).*

| | Student performance | Teacher pupil ratio | Teacher education | Learning materials |
|---|---|---|---|---|
| Student performance | 1 | | | |
| Teacher pupil ratio | .638** | 1 | | |
| Teacher education | .565** | .399 | 1 | |
| Learning materials | .552** | .627* | .565* | 1 |

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

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

The results in table 4.2.4 above show that all the three independent variables reported solid positive significant relationships with the dependent variable, student performance. Learning materials reported a very strong positive relationship with student performance ($r = 0.552$, N=250, $p < 0.01$), student performance and teacher-pupil ratio ($r = 0.638$, $p < 0.01$), Teacher education and student performance ($r = 0.565$, $p < 0.01$) also reported very strong positive relationships.

All in all, the variables are all positively correlated, as table 4.2.4 above shows no negative correlation. Hence, this means that increasing the resource allocation (teacher-pupil ratio, teacher education and learning materials) will increase students' performance.

Thus, we have enough statistical evidence to reject the null hypothesis and conclude that there is a positive significant linear relationship between teacher-pupil ratio, teacher education, and learning materials with students' performance.

Also, since none of the correlations in Table 4.2.4 was above the value of 0.80, issues with collinearity were not a problem in this study.

### 4.4 Establishing the combined effect of the Independent variables on the dependent variable in the study.

### 4.4.1 Results for the Assumptions of Multiple Regression Analysis Tests.

Before multiple regression analyses can be used, the assumptions must be met.

### 4.4.2 Assumption of Normality.

Figure 1 below shows the histogram with a standard distribution curve; the assumption for normality has been met since the histogram is normally distributed.
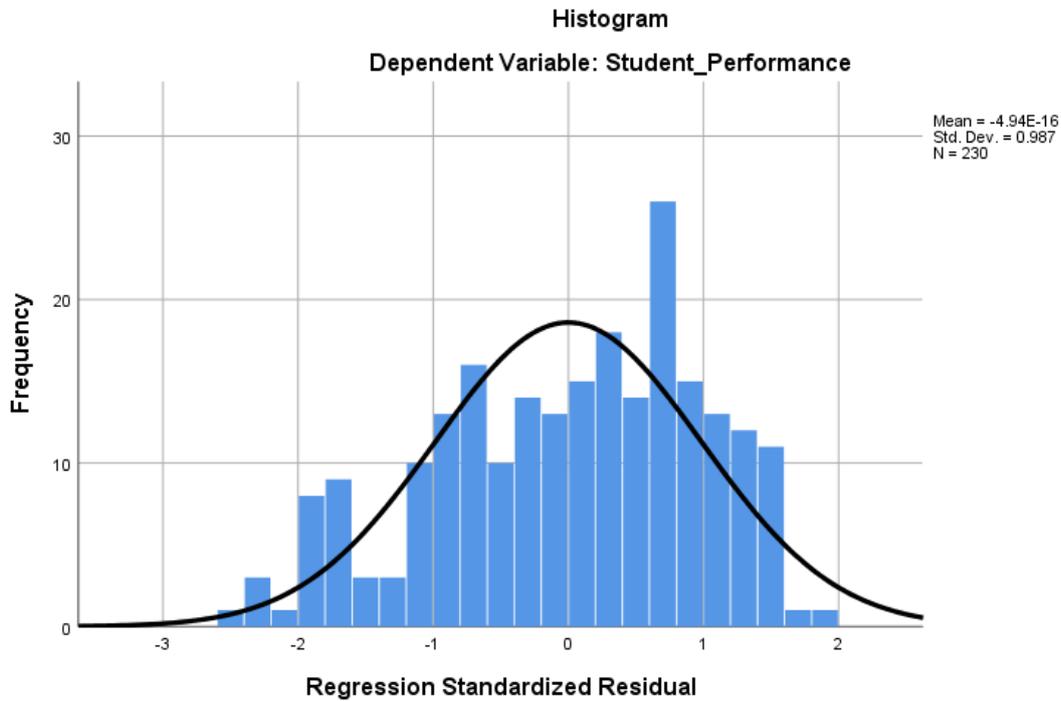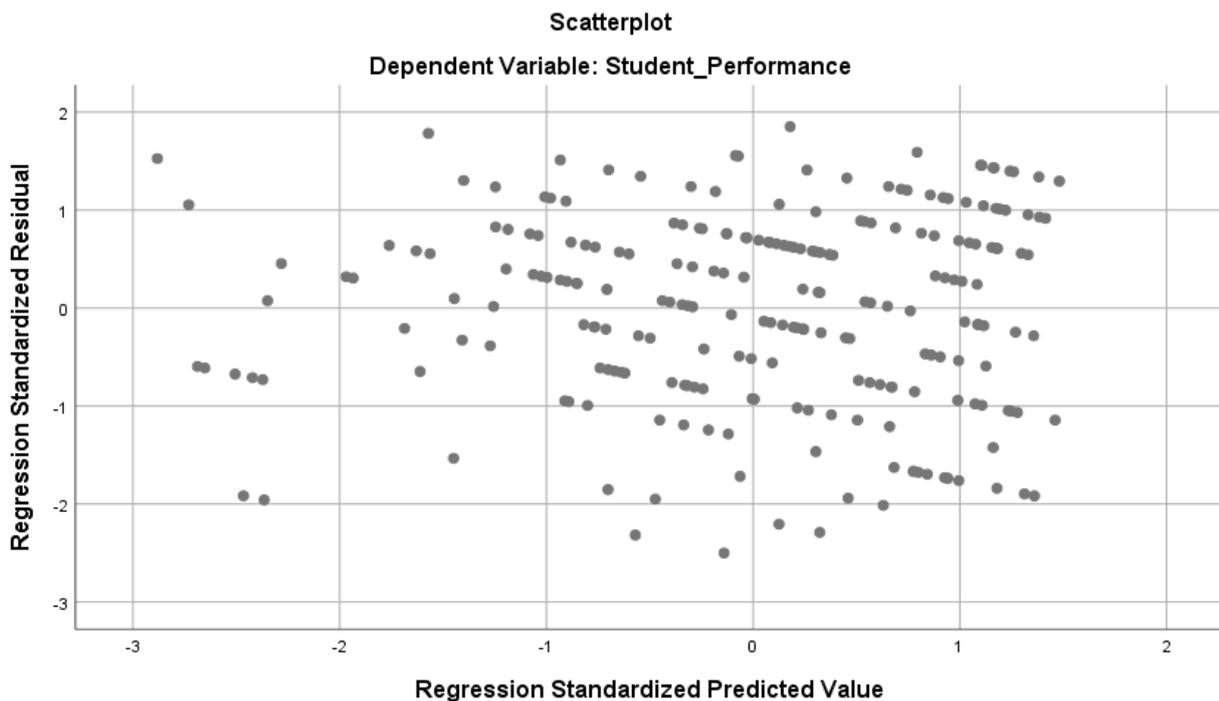


Figure 1: Histogram and normal curve for Regression standardized Residuals.

**Assumption of Linearity, Homoscedasticity and Independence of Errors.**

*Figure 2: Scatter plot for Regression Standardized Residuals and Predicted values 2*

The scatter plot in Figure 2 show that the points are scattered and there is no observed pattern in the point on the graph. This implies that the assumption for linearity and homoscedasticity is met. Also from the scatter plots the assumption of independence of errors is met as can be seen from the figure that there are no autocorrelations.

Thus, the best fitting model for predicting Student performance from the analysis above would be the linear combination of teacher pupil ratio, teacher education and learning materials.

Having met the assumptions of linear regression, the study went on to establish the combined effect of teacher pupil ratio, teacher education and learning materials on the performance of students. The following hypothesis were tested.

**H$_0$:** Teacher pupil ratio, teacher education and learning materials has no significant effect on student performance.

**H$_1$:** Teacher pupil ratio, teacher education and learning materials has a significant effect on student performance.

Multiple linear regression analysis was used to establish the combined effect of Teacher pupil ratio, teacher education and learning materials on student performance.

*Table 4.4.1: Model Summary for Multiple regression analysis.*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-----|----------|-------------------|----------------------------|---------------|
| 1 | .722[a] | .521 | .509 | .50220 | 2.238 |

a. Predictors: (Constant), Teacher pupil ratio, teacher education and learning the materials.

b. Dependent Variable: Student performance

**Source: Author (2022).**

According to Field (2009), when the Durbin-Watson statistics value is found to be in the range of 1.5 to 2.5 then the data can be considered to be relatively normal. The Durbin-Watson statistics obtained in this study was found to be 2.238, this points out to us that our data has no autocorrelations.

The R value reported in our model summary above in table 4.4.1 was found to be 0.722 and when we convert this decimal fraction into a percentage we have 72%. This 72% is the variance that is shared by teacher pupil ratio, teacher education and learning materials on student performance.

In order to test if teacher pupil ratio, teacher education and learning the materials significantly affected student performance. We used the regression summary model above and the results shows that with all the three independent variables, the model explained 52% of the variance ($R^2$=.521, F (3, 117) =42.495, p < .05). The table containing the F value is shown in table 4.4.2 below.

*Table 4.4.2: The ANOVA table with the F value*

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 32.152 | 3 | 10.717 | 42.495 | .000[b] |
| | Residual | 29.507 | 117 | .252 | | |
| | Total | 61.659 | 120 | | | |

a. Dependent Variable: Student performance.

b. Predictors: (Constant), Teacher pupil ratio, teacher education and learning materials.

**Source: Author (2022).**

Thus, these results indicate that teacher-pupil ratio, teacher education, and learning the materials significantly affect student performance. Table 4.4.2 above shows that our F value is significant with p<0.05. This hints that our regression model is significant. Accordingly, when taken as a set teacher-pupil ratio, teacher education and learning materials pooled together will significantly affect student performance. Therefore, we have enough statistical evidence to reject the null hypothesis and conclude that teacher-pupil ratio, teacher education and learning materials have a significant effect on student performance.

**4.5 Establish the direct effect of each independent variable on the dependent variable.**

To check whether teacher-pupil ratio, teacher education, and learning materials directly affect the performance of students, the following research hypothesis was also tested.

**H$_0$:** Teacher pupil ratio, teacher education, and learning materials each have no direct effect on the performance of students

**H$_1$:** Teacher pupil ratio, teacher education, and learning materials each directly affect the performance of students.

To answer this research, question the beta coefficients of the independent variables in the table below were examined.

After examining the Beta coefficient in the table below, two of the three independent variables significantly predicted student performance. These variables are teacher-pupil ratio ($\beta$ =.466, p<.05) and learning materials ($\beta$ =.372, p<.05). This means that the teacher-pupil ratio and learning materials each have their unique direct effect on student performance. In addition, the variance that is explained by the teacher-pupil ratio or learning materials cannot be explained by any other variable.

The other independent variables (Teacher education $\beta$= 0.189, p>0.05) did not significantly predict students' performance. This means that teacher education has no direct effect on student performance.

*Table 4.4.3: Beta coefficient of the independent variables.*

|   |   | B | Std. Error | Beta | T | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | -.227 | .327 |  | -.695 | .489 |
|   | Teacher education | .189 | .118 | .139 | 1.604 | -.112 |
|   | Teacher pupil ratio | .466 | .097 | .403 | 4.788 | .000 |
|   | Learning materials | .372 | .080 | .340 | 4.667 | .000 |

a. Dependent Variable: Student performance

**Source: Author (2022).**

### 4.6 Chapter Summary

This chapter presents the research findings of the study. The study's primary analyses were Pearson Bivariate correlation analysis and multiple linear regression. Results and the hypothesis tested are summarised in the table below.

*Table 4.4.4. Summary of results of Hypothesis Testing*

| No. | Hypothesis | Statistic | Test | Results |
|---|---|---|---|---|
| H$_1$ | There is significant relationship between teacher pupil ratio and student performance. | r = 0.63* | Bivariate Correlation | Supported |
| H$_2$ | There is significant relationship between teacher education and student performance. | r = 0.565* | Bivariate Correlation | Supported |
| H$_3$ | There is significant relationship between | r = 0.552* | Bivariate Correlation | Supported |

| | | learning materials and student performance | | |
|---|---|---|---|---|
| H$_4$ | Teacher pupil ratio, teacher education and learning materials has a significant effect on student performance. | $R^2 = 0.52$ | Multiple Regression analysis | Supported |

# CHAPTER FIVE: Conclusions and Recommendations

## 5.1 Introduction

This chapter examines the conclusion of the findings grounded on the investigation targets. It also presents the recommendations emerging from the study, which might move students' academic performance forward.

## 5.2 Conclusions

This study appeared that resource allocation and student performance are related. It illustrated that when resources are expanded, it makes a difference in the progress of the students' performance. The Theory expressed, "There is no critical relationship between resource allocation and students' scholarly execution." The analyst utilised investing in learning materials, educator instruction and teacher-pupil proportion as an intermediary for resource allocation, whereas they considered using student pass rate to intermediary execution. The relapse examination was utilised to decide the relationship between resource allocation and students' academic performance.

### 5.2.1 Resource Allocation (Teacher Pupil Ratio)

For teacher – pupil ratio the regression analysis coefficients gave a significance index for all the years as the index or standard error was always less than the t- alpha. This revealed that the teacher- pupil ratio was significantly related to academic performance of students.

This is in consistent to what Horng et al., (2009) found, and stated that improvements in the teacher pupil ratio resulted in faster growth in performance of student. This is consistent with the large literature demonstrating the importance of principals in delivering good educational outcomes by effectively managing schools and attracting, retaining good teachers and training teachers.

### 5.2.2 Resource Allocation (Teacher Education)

The quality of content delivery is very critical to the learning process.  For Teacher education, the analysis revealed that r = 0.565* was a significant relationship.  This result means, when pupils receive instruction from a well-qualified teacher, they are likely to apply those instruction very well, unlike when they are coming from a unqualified teacher.

### 5.2.3 Resource Allocation (Learning Materials)

This revealed that learning material spending was significantly related to academic performance of students. This is typically in line with Nicoletti et al (2012) study in the U.K secondary schools, which found that increased per-pupil use expanded accomplishment development by around 0.04. additionally, Gibbons et al (2012) also found out that primary-school performance accomplishment

raised by 0.01 with extra £400 in per pupil use.  This research uncovered that learning materials investing was altogether related to student performance.

**5.3 practical/managerial implications of findings/recommendations.**

This study identified a number of actions or strategies that policymakers can and should take in order to achieve high student performance in schools:

- The government to look for adequate funds to schools to support instructional goals.  If shortages exist, then they need to work hard to determine how to increase spending in prioritizing areas in the education areas.
- Identify ways or means through which existing resources might be used more efficiently, additional resources might be obtained, and fund sources might be pooled for greater effectiveness.
- The government must direct schools in ways that best bolster staff through procedures suc as building capacity in all staff, realigning staffing structures to suit the qualities and shortcomings of existing groups.  Finding ways, the government can recruit abstain quality through a stipend and bolster framework.
- The government ought to back up the collection of practical information and detailed performance data.  It ought to train decision-makers to utilize the information for following investing and dissecting the adequacy of the use.
- Schools to conduct cost-benefit and other investigations to guarantee the government's information on assets should be explicitly tied to particular instructive programs, staffing arrangements, and distinctive change procedures.
- Government should give preparation and direction so that schools can (1) utilize student performance information to recognize needs and priorities, (2) look at research-based data to distinguish the procedures and practices that would best address their needs, (3) communicate the objectives and methodologies in their enhancement arrange to all partners, (4) to assess the adequacy of change methodologies and alter both procedures and assets that bolster them if required.  These procedures will offer assistance to guarantee that actualizing an enhancement arranging handle is fundamental fruitful resource allocation.
- Government must realise that one estimate does not fit all concerning approaches to successful resource allocation.  Policymakers ought to consider the particular circumstances of understudies and schools in arranging a way to distribute resources.
- The researcher wishes this research could be extended to other districts of Zambia to see if all the districts face the same resource allocation challenges.

### 5.4 Limitations of the study and directions for future research

### 5.4.1 Limitations of the study

The study endured the insufficiency of local literature. No literature was found related to resource allocation and student performance in Zambia. The researcher had to depend on now reviewed literature in remote articles, diaries, and other inquiries conducted in foreign countries. Making references to past nearby questions about discoveries would have made a base for audit of the writing and helped lay a concrete foundation for comprehension of information and the investigation issue that the researcher was exploring.

In addition to the above, due to limited resources, the research was restricted to Kabwe district schools only.

### 5.4.2 Direction for Future Research

A proposed area of further study would be on;

i. To examine the challenges that hinder the central government to allocate adequate resources to schools.

These findings would be necessary for decision-makers and partners trying to set up the variables that influence student preperformance.

### 5.4 Chapter summary

This chapter has given the conclusion and the way forward towards the effective resource allocation which wipll bring about improvements in the performance of students with special interest on schools in Kabwe district.

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**ZCAS UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**Dear respondent,**

I am a ZCAS University student pursuing a Master's Degree in Economics and Finance/ undertaking a research on a topic "The Effect of Resource allocation on the performance of students. A case study of Kabwe district"

I wish to request for your input in the following questionnaire to enable me achieving the research objectives. The information that will be obtained from this study will be used strictly for academic and will be handled with strictest confidentiality. Finally, I wish to thank you in advance for taking much of your precious time to answer this questionnaire.

**Instructions:**

1. Answer questions by ticking in the space provided.

2. Please note there is no right or wrong answer.

**Section A:**

1. **<u>Demographic Profile of the respondent</u>**

In this section, we are interested in your background in brief. Your answer will be kept strictly confidential. (Tick where appropriate)

**1**. **Gender:** Male ☐ Female ☐

**2. Age**: _____

**3. Highest level of educational attained**

College Certificate ☐ Diploma ☐ Degree ☐

Others (Please Specify): _____

**4. For how long have been working as a teacher**

Less than a year ☐ 1-5 years ☐ 6 and above years ☐

**Section B**:

Please indicate the extent to which you agreed or disagreed with each statement using 5 points Likert scale.

(1) = Strongly Disagree (2) = Disagree (3) = Neither agree nor disagree; (4) = Agree (5) = Strongly Agree

Please circle one number per line to indicate the extent to which you agreed or disagreed with the following statements.

**1. Teacher Pupil Ratio**

Circle the number that best describes your response to each statement.

| Items | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. Reduced class sizes can lead to improvement in student performance | 1 | 2 | 3 | 4 | 5 |

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 2. I believe reduced class loads has an impact on the performance of learners | 1 | 2 | 3 | 4 | 5 |
| 3 Increased planning time for teachers is key to good performance of students | 1 | 2 | 3 | 4 | 5 |
| 4 Low enrollment levels in the school can result in the good performance of students | 1 | 2 | 3 | 4 | 5 |

**Teacher Education**

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 5 Increased number of teachers with more experience or higher degrees can led to good performance of students | 1 | 2 | 3 | 4 | 5 |
| 6 Results are good if teachers are provided with more professional development (CDP) | 1 | 2 | 3 | 4 | 5 |
| 7 Providing scholarships to teachers so that teachers can upgrade they qualifications can improve student performance | 1 | 2 | 3 | 4 | 5 |
| 8 Teachers with Diplomas tend to teach better than teachers with degree. | 1 | 2 | 3 | 4 | 5 |
| 9 Poor results in schools are because teachers lack subject matter | 1 | 2 | 3 | 4 | 5 |

**Learning Materials**

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 10 Increase access to computer technology. | 1 | 2 | 3 | 4 | 5 |
| 11 Increase use of classroom aides | 1 | 2 | 3 | 4 | 5 |
| 12 Improve building facilities or maintenance | 1 | 2 | 3 | 4 | 5 |
| 13 Provided needed school materials or equipment | 1 | 2 | 3 | 4 | 5 |
| 14 Increased special instruction program (such as reading) | 1 | 2 | 3 | 4 | 5 |

**Student Performance**

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 15 Students in class perform better if the teacher pupil ratio is low | 1 | 2 | 3 | 4 | 5 |
| 16 The performance of the students is enhanced if the teacher has a degree | 1 | 2 | 3 | 4 | 5 |
| 17 Learning materials are a key component in the performance of the students. | 1 | 2 | 3 | 4 | 5 |
| 18 Improved programs and services for at risk students contributes to student good performance. | 1 | 2 | 3 | 4 | 5 |

**Thank you for your cooperation**