INFLUENCE OF LIBRARY RESOURCES ON MATHEMATICS PERFORMANCE IN KENYA CERTIFICATE OF SECONDARY EDUCATION IN PUBLIC SECONDARY SCHOOLS IN MURANGA COUNTY, KENYA

Patricia Kamathi Muchena.
Department of Educational Management, Policy and Curriculum Studies, Kenyatta University, Kenya.
Wilson Mutuma Michubu.
Department of Educational Management, Policy and Curriculum Studies, Kenyatta University, Kenya.

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ABSTRACT

The study aimed to examine the influence of library resources on mathematics performance in Kenya Certificate of Secondary Education in public secondary schools in Muranga County, Kenya. Correlational research design was employed for this study. For data collection purposes, 55 secondary schools within Kandara Sub County served as the target population comprising 55 principals alongside 425 mathematic teachers. Stratified sampling technique was utilized in the study for selecting the schools. In order to select head teachers in chosen schools, the purposive technique was employed. Meanwhile, mathematic teachers were sampled through simple random sampling method with 230 respondents as sample size. Instruments of data collection included a questionnaire and an interview schedule administered by the researcher during in-depth interviews with head teachers. To conduct the quantitative data analysis, the Statistical Package for Social Sciences computer software package (SPSS statistics version 25) was used. The Quantitative data generated was subjected to the descriptive statistics feature in SPSS to generate mean, and standard deviation which was presented using tables, frequencies and percentages. The inferential statistics that was utilized in this study was a correlational analysis. The qualitative data from the interviews was analyzed using thematic analysis. The study found that library provides students with invaluable resources that enhance their coursework and research. The study found that there were adequate desktop computers to each learner which improved their learning. The study found an outstanding positive relationship between material resources and academic performance. The study concluded that recruitment process; proper placement of teachers in schools, regular performance evaluation had positive influence on students' academic performance. The study recommended that there was need for the formulation of a policy that mandates all the secondary schools to have library infrastructure and equipped with reading materials and internet availability.

Key Words: Digital Resources, Human Resources, Library Resources, Material Resources, Performance.

INTRODUCTION

Mathematics education is crucial to the economic growth of any advanced country (Ma, 2010). Forward-thinking leaders are aware that to produce deep thinkers, they address the mathematics difficulties of students in universities (Markopoulos et al., 2018). Mathematical knowledge goes beyond manipulating numerical symbols. Just because an individual can solve algebra or arithmetic problems does not mean that the person can think mathematically. Being proficient in mathematics requires a tremendous amount of mathematical thinking, and this thinking involves having the ability to engage in computational reasoning, spatial reasoning and computational/analytic reasoning. Ernest (2018) argued that mathematics required more than manipulating numbers and performing

basic algebra. According to the scholar, there are three forms of essential mathematics: practical numeracy, practical job-related knowledge, and professional expertise. Practical numeracy is meant for productive functioning in the community, while practical job-related knowledge is required for all-purpose occupations at the end of schooling (Ernest, 2018). In sum, professional expertise in mathematics is needed to solve industrial problems and work centred practical problems.

Globally, a study conducted in Philippines by Limon (2016) found that the availability of instructional resources is a crucial factor affecting students' educational outcomes in mathematics. It reinforces skill and knowledge acquisition, making it imperative for school administrators to focus on policies and procedures related to mathematics resource provision and management. The insufficiency of these resources in mathematics has been shown to negatively impact student mathematic performance and achievement (Akinoso, 2018). Past study by Montenegro, Clasing, Kelly, Gonzalez, Jara, Alarcón, Sandoval, Saurina, (2016), showed that the utilization of library resources in learning mathematics positively influences the performance. Libraries influence the learners experience by acting as source of knowledge and supplement classroom teachers' notes and the mathematics course books to broaden their intellectual horizons (Soria, 2013).

In Africa, the availability of resources for teaching and learning, along with teachers who are properly trained, prepared, supervised and motivated as well as sufficient physical facilities can enhance students' performance in different subjects like mathematics. A study by Rosylyne (2018) revealed that when instructional materials are unavailable or scarce, it becomes difficult for educators to effectively communicate the curriculum into real-life educational experiences especially those involving science and technology which may hamper academic success rate. This study examined the impact of instructional resources on the achievement of secondary educational goals in Nigeria. Nevertheless, this study was conducted in Nigeria using science and technology; in contrast, the planned study will examine how students' success on the KCSE is related to the resources used for teaching and learning mathematics. Adeogun (2018) asserts that educational institutions with higher performing professors are those whose instructors utilize more teaching and learning resources. This supported the Babayomi (2019) study, which found that because private schools offer ample and high-quality teaching and learning resources, their pupils and teachers outperformed those in public schools.

In Kenya, Resources and facilities are essential for performing mathematics. Lower grades have been the tendency despite the subject's syllabus being reviewed (Kenya Institute of Education 2006), and there have been concerns and outcries every time the KCSE results are announced (Njoroge 2014). Numerous studies have pinpointed a few of the elements that contribute to subpar math performance, including students' attitudes toward the topics, culture, resources, and equipment. Many students who perform poorly in mathematics lose the opportunity and motivation to pursue higher education because most courses provided in higher education demand a minimum average of seven points out of twelve, or a c+, in

mathematics in order to be admitted to any discipline. To be able to think mathematically, students need to have a solid foundation in the subject. Developing a positive attitude and increasing learning resources can help improve, if not improve, mathematics. Student's negative mindset towards mathematics, lack of proficient teachers and inadequate instructional materials are identified as contributing factors to unsatisfactory results in math (Tata, 2013).

The current study will focus on library resources, digital resources, human resources and material resources and their influence on mathematics performance in Kenya Certificate of Secondary Education. Regarding library resources, the use of libraries as a teaching and learning process strategy recommends that, when implementing the secondary education curriculum at the ordinary level, students look for pertinent materials online and in libraries, allowing for student-material interaction. They should also develop independent study skills by using a variety of library resources, including books, electronic resources, and journals. Furthermore, teacher-student materials involve educators providing guidelines to pupils for discovering resources from diverse outlets such as the library. In contrast, student-student materials encompass conversations among classmates utilizing a multitude of publications and other references available at libraries. Thus, libraries are essential for supporting both teaching and learning as well as self-learning. As a result, secondary school administrators and owners must make sure that their institutions have standard libraries that are fully stocked with current literature and easily accessible to students of all skill levels.

On digital resources, Li and Ma (2010) conducted a meta-analysis of the effects of digital learning on students' learning mathematics in schools and they showed an overall positive effect. The authors considered 46 primary studies with a combined total of more than 36,000 students in elementary and secondary education. Standardized assessments examined the other half of the mathematical achievement results, with locally created or teacher-made instruments accounting for the other half. The majority of research were meticulously supervised, using random assignment to place students in either experimental or control groups. The authors' overall findings showed that, on average, digital technology had a high, statistically significant positive effect on mathematics achievement (mean effect size of 0.71), meaning that, generally speaking, students who used digital technology to learn mathematics achieved more in the subject than those who did not. The research conducted by Lee et al. (2009) and Biagi and Loi (2013) found that digital technology has a similar effect on math as it does on reading and literacy. Students who use computers for schoolwork, at least one hour a day, perform better in mathematics tests compared to those who don't use them. Such students also receive more commendable feedback from their teachers regarding classroom behavior. Furthermore, the motivation of students towards learning math is boosted when they utilize electronic devices during formal instruction as per studies carried out on this topic.

On human resources, since all other components are useless without human labour, the human resource seems to be the most crucial of all the factors. The effectiveness of human

resource management in Kenyan schools is under scrutiny from both professional and non-professional circles. The fact that schools are understaffed and mismanaged due to a lack of skilled staff and management resources to improve instruction is something that many educationists will readily acknowledge. The Government of Kenya (GoK) has made the advancement of education and training a permanent goal since gaining independence. According to Karugu (2018), education is now seen as a tool for advancing social, economic, and political development as well as an investment that broadens perspectives, empowers women and men equally, and enables active engagement in projects and programs for development. It is significant because it imparts attitudes, abilities, and information that are consistent with sustainable development. Because of the current discrepancy between theory and practice, teacher colleges and universities need to reassess their training curricula. This is because the knowledge that has been gained has not been applicable to the actual scenario. The review of the aforementioned curricula should be handled by the Ministry of Education and the universities working with the teacher training colleges. According to Karugu et al. (2018), the caliber of the educational system is only as good as the caliber of its instructors.

On material resources, Numerous studies have been conducted regarding academic achievement and instructional materials. For example, Isola (2010) studied how material resources affected Kwara State pupils' performance on the West Africa School Certificate Examinations (WASCE). He discovered a correlation between pupils' academic performance in 10 subjects and their material resources.; Biology, Chemistry, Mathematics, Physics, English, Geography, History, Agriculture, Technical subject and Commerce. He concluded that material resources significantly affected students' achievement in each of the subjects. The performance of the schools with sufficient teaching materials was superior to that of the schools lacking such materials. A framework for optimizing learning for students with learning disabilities is provided by material resources and scheduled activities, which give them chances to practice newly acquired skills and gain new knowledge while yet being adaptable and controllable. Therefore, educators should find teaching materials that: encourage students to actively learn the desired abilities; provide excitement to the lesson; are appropriate for the students' age and ability level; and immediately result in the acquisition of new skills.

Most schools especially in Kandara Sub County are in dire need of teaching and learning resources such as textbooks, teachers guide and libraries especially for the mathematics subject (Bosibori, Ngao, Rop & Wesonga, 2019). The general trend in performance of mathematics in Kandara Sub county has not been impressive for the last five years. Table 1.1. shows the trend in performance of mathematics in Kandara Sub County.

Year	2018	2019	2020	2021	2022
Mean score	2.178 (D-)	2.201 (D-)	2.015 (D-)	2.435 (D-)	2.342 (D-)

Source: SCEO (2023)

From 2018 to 2022, Kandara Sub County secondary schools have experienced a downward trend in KCSE math exam results. A majority of the surveyed schools scored significantly below average that is 2.178 in 2018, 2.201 in 2019, 2.015 in 2020, 2.435 in 2021 and 2.342 in 2022. Additionally, all of them had lower than average mean grades (D-) in all the last 5 years. Consequently, conducting empirical research is vital in identifying underlying causes for this poor performance. It is observed that each school in Kandara Sub County has its pertinent problem especially on mathematics as a subject which includes unavailability, under-utilization, and inadequate learning teaching and learning resources. The underutilization of mathematics instructional resources can have a negative impact on student academic performance. However, if these resources are effectively utilized, they may lead to improved academic performance in the subject (Maluni, 2021).

Problem Statement

Mathematics is valued in the society for its development ability and potential to advance technology and science because of its abstract nature. Acquiring apprehension in mathematics is a key responsibility of schooling. Sciences and arts consider mathematics to be the foundation of learning. In almost all fields, it's considered as requisite: economics and technology, sports angles and fashion measurements. The crucial nature of acquiring perquisite skills in mathematics has been stressed by studies as well as the performance of mathematics in secondary schools. Our daily lives are defined by mathematics; to achieve the Kenya's vision 2030, it was inevitable to provide quality education that could ultimately lead to student's high performance. Students have however continued to perform dismally in mathematics despite its critical role. This has been observed in national examination. Mathematics achievement generally has been poor in many parts of the Country. Kenya is experiencing poor achievements in mathematics despite the subject being considered as fundamental in turning around its industrialization by 2030.

The same trend of poor mathematics performance has been noted in Kandara Sub County over the years. This trend indicates that very few students attain the required grade of C+ in the subject which is the minimum grade required to pursue a degree course in local universities. The implication of the poor mathematics performance in the sub county (D-) means that majority of students dream for tertiary education has been jeopardized by poor accomplishments in mathematics. There exists a host of studies examining teaching of mathematics and mathematics performance such. However, from a general perspective, majority of these studies have not considered social economic disparities in a particular region and tend to ignore adequacy and standards of learning and teaching resources in public schools and public schools' teacher's workload. This study was dedicated to fill these gaps in knowledge by examining the influence of library resources on mathematics performance in Kenya Certificate of Secondary Education in public secondary schools in Muranga County, Kenya.

LITERATURE REVIEW

Enoma (2018) investigated the influence of library resources on successful teaching and learning in secondary schools offering social science subjects at Ambrose Alli University located in Ekpoma, Edo State. The study employed a descriptive survey design approach and involved gathering data through questionnaires. The study's population consisted of 131 university secondary school teachers and 542 senior students from the schools. In order to include all 131 teachers, the researchers employed the total enumeration method. Additionally, a selection of 300 senior secondary school students were chosen using purposive sampling techniques. After collecting data via questionnaires from a sample size of 127 teachers and 278 students, simple percentage calculations as well as mean and standard deviation analyses took place. The investigation revealed that various reading materials such as recent textbooks, reference books including maps and globes plus atlases alongside fiction in poetry or novels form part of resources available at libraries within schools; these resources proved widely accessible throughout said institutions. There is a knowledge gap since the previous study's setting was distinct from the context of the current investigation, making it unable to generalize the findings.

Suleiman and colleagues (2018) investigated the impact of library services on academic performance in secondary schools situated within Kwara State, Nigeria. A total of twenty schools were selected from three distinct senatorial districts using a non-probability sampling technique that included stratified, purposive, and convenience methods. The principals represented each chosen school. To obtain relevant data for the study, the research design incorporated interviews and an observational checklist. The data was analyzed using Nvivo software (version 10). The study's findings demonstrated that library services benefited students' academic progress positively. Additionally, findings revealed that schools lacked proper library facilities and contents. School libraries also have inadequately qualified library employees. There is a knowledge gap because the previous study's environment was distinct from the one used in the present one, making it unable to generalize the findings.

Chipana (2018) conducted a study on the impact that library resources on academic outcomes for secondary school students in Tanzania. A multiple case study design was used for this investigation that involved both qualitative and quantitative methods. Participants were selected using purposive, stratified, and simple random selection procedures. Data was collected through questionnaires, interviews, and a documentary review with descriptive statistics analyzed via SPSS version 20 software. The findings indicated that existing school libraries did not adequately support student learning due to inadequate space for placing books or accommodating library users. There is a knowledge gap because the study methodology differs from the current study.

Scoulas and De Groote (2019) delved into the influence of libraries on university students' academic progress and learning. Utilizing Spearman's rank correlations for quantitative analysis between library experiences and GPAs, they also performed thematic analysis to

understand qualitative data. The findings show that a majority of participants reported higher GPAs when utilizing varied resources such as journals or databases found within it. According to qualitative results, study participants viewed the library primarily as an environment promoting conducive learning while providing essential support specifically geared toward homework assignments and research inquiries. There is a knowledge gap because the study did not specifically evaluate comprehensively on how library resource influences performance in mathematics.

Rodrigues and Mandrekar (2020) investigated how academic library services affect student achievement. A random survey was conducted to identify challenges students face when accessing resources in the library and determine their impact on academics. The study uncovered a significant link between using the library and success in achieving academic goals. Consequently, it recommends that students participate in an information literacy program to learn about available digital tools, amenities, and services offered by libraries for maximum benefits utilization. Because the study did not thoroughly examine the relationship between library resources and mathematics performance, there is a knowledge gap. This study aims to fill the knowledge gap by establishing the influence of library resources on mathematics performance in Kenya Certificate of Secondary Education.

Theoretical Framework

In this study, Yutchman and Seashores' (1967) System Resource Theory was adopted. According to the theory, effective planning, acquisition, distribution and utilization of scarce organizational resources is necessary in order to achieve desired objectives. The application of this theory suggests that schools must utilize their human, physical and material resources effectively in order to generate optimal outputs. Oni (1995) highlights how both industries and educational institutions alike process certain inputs into specific outcomes; for example, students are admitted into schools where they interact with teaching materials resulting ultimately in learning outcomes being achieved. When a school has sufficient physical and material resources that are utilized efficiently, it results in high-quality learning outcomes. Across the globe, academic performance is viewed as an essential measure of effective education.

The achievement or lack thereof by students reflects how teaching occurs and resource utilization within the institution. Academic success indicates proper allocation of educational resources while academic failure suggests inadequate provision for implementing curriculum goals despite potential student-related factors being considered. The concept of this theory allowed the study to examine the influence of utilization of teaching-learning resources on mathematics performance in Kenya Certificate of Secondary Education in public secondary schools in Kandara Sub County, Muranga County, Kenya. By employing the concept of this theory, learners can be effectively engaged and informed of objectives while recalling prior knowledge. Additionally, content delivery will be optimized through guidance with practice opportunities followed by feedback assessment on their mathematical skills. Teachers are able to choose the instructional resources

necessary for mathematics teaching, by considering the learning environments, one can choose suitable materials and exercises that will enable pupils to attain their desired educational objectives.

Methodology

Research Design

The proposed study utilized a correlational research design, which allows the researcher to explore associations between variables without any control or manipulation over them. Correlation measures the strength and direction of these relationships, whether positive or negative. The research design was recommended for this study in that it helped the researcher to examine complex phenomena involving multiple variables simultaneously to understand how they may be related and linked in various ways. The results of correlational studies helped inform things like public policy because the information was gathered directly from real-world situations.

Target Population

This study targeted 55 secondary schools, 55 principals, and 425 mathematic teachers in Kandara Sub County (Kandara Sub County Education Office, 2023). The target for the principals and mathematic teachers was because they are resourceful regarding the information on utilization of teaching-learning resources and their influence on mathematics performance. The population was as shown in table 1.

Table 1. Target Population

Target Population	Population size	Percentage
Principals	55	11.5
Mathematic teachers	425	78.5
Total	**480**	**100**

Source: Kandara Sub County Director of Education Office (2024).

Sampling Technique and Sample Size

Stratified sampling technique was utilized in the study for selecting the schools. The reason for using the stratified sampling method was because it enabled the researcher to even sample the smallest groups of population which may be inaccessible (Aldi, 2016). In contrast to alternative methods of sampling, the use of stratified sampling methodology ensured that every section present in the population was adequately represented. Therefore, by utilizing random sampling within each subgroup and ensuring their inclusion, researchers can provide a more accurate representation of the entire populace (Dunne, 2012).

The population was divided into strata that is the principal's strata and mathematics teacher's strata. This enabled the researcher to be able to pick the population equally from the various groups. The principals in the selected schools were selected using purposive technique. In using purposive sample technique to pick principals the researcher assumed

that the respondents provided the information needed as they are in charge of curriculum supervision (Rai, & Thapa, 2015). The choice of their schools predetermined their inclusion. According to Etikan et al. (2016), the researcher employed purposive sampling to extract ample information from the gathered data, ultimately enabling them to portray how significantly these results can impact the population. Simple random sampling technique was used to sample mathematic teachers. The use of simple random sampling ensured that the results obtained from the sample were close to what would have been achieved if the full population had been examined (Meng, 2013).

A sample size of 17 schools was chosen from the 55 target secondary schools. This represented 30% of the target population. The justification for this sample size was based on Mugenda and Mugenda's (2003) claim that a correlational study requires a sample size of between 10% and 30%. The schools were divided into strata, from which the researcher choose one head teacher for each stratum. A sample of 17 principals was chosen from the 55 target head teachers. This represents 30% of the target population. The justification for this sample size was based on Mugenda and Mugenda's (2003) claim that a sample size of 10% to 30% is sufficient for a correlational study. The study used the Yamane (1967) formula to determine the sample size of the mathematics teachers. The formula was as follows:

$n= (N/ (1+N (e)^2$

Where

n= the required sample size

N = is the Target Population (425 teachers)

e = accuracy level required.

Standard error = 7%

Sample calculation for households

$n=425/ (1+425 (0.07)^2$

n=203

A sample of 203 mathematic teachers was used. The distribution is as shown in table 2

Table 2. Sample Size

Target Population	Population size	Sample ratio	Sample size
Principals	55	0.3	17
Mathematic teachers	425	0.47	203

Source: Kandara Sub County Director of Education Office (2024)

Data Analysis

Data analysis is a process of inspecting, cleaning, transforming, and modelling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making (Paul Oliver,2004). In order to bring order, structure and interpretation to the collected data, the researcher systematically organized the data by coding it into categories and constructing matrixes. After classifying the data, the researcher compared and

contrasted it to the information retrieved from the literature review. To conduct the quantitative data analysis, the Statistical Package for Social Sciences computer software package (SPSS statistics version 25) was used. The Quantitative data generated was subjected to the descriptive statistics feature in SPSS to generate mean, and standard deviation which was presented using tables, frequencies and percentages.

The inferential statistics that were utilized in this study was a correlational analysis. Pearson Moment correlation was evaluated for the relationship between independent and dependent variables, and placed on interval and ratio scales using correlation analysis. The statistical link between two or more variables is summarized by the correlation coefficient, also known as r. The scale for the correlation coefficient is always set to be between -1 and +1. There isn't much of a relationship between the variables when r is close to 0, but it gets stronger when r deviates from 0 in either a positive or negative direction. The qualitative data from the interviews was analysed using thematic analysis. This was done in accordance with Zina's (2010) recommendations for qualitative data analysis, in which the obtained data was processed, sorted out, coded, and thematically analysed, with a focus on finding meaning, interpreting, and making conclusions based on the study objectives.

RESEARCH FINDINGS AND DISCUSSIONS

Library Resources

Extent of Agreement on Library Resources

The respondents were requested to indicate the extent to which they agreed with statements on staff development. The findings are as shown in table 4.

Table 3. Teachers Extent of Agreement on Library Resources

Teachers Extent of Agreement on Library Resources	N	Mean	Std. Dev
The capacity and resources in the library are adequate for the number of students in the school	172	4.116	0.517
Use of library resources promotes effective teaching and learning in secondary schools	172	4.291	0.538
Library provides students with invaluable resources that enhance their coursework and research	172	4.343	0.652
Adequacy of library facilities and materials promotes effective teaching and learning among students and thus improves their performance	172	4.209	0.727
Reference materials, maps, globes and atlases as well as novels and poetry available in the school libraries promotes student's literacy and their overall performance	172	4.326	0.611

From the findings the respondents agreed that library provides students with invaluable resources that enhance their coursework and research (mean=4.343), followed by reference materials, maps, globes and atlases as well as novels and poetry available in the school libraries promotes student's literacy and their overall performance (mean=4.326), use of library resources promotes effective teaching and learning in secondary schools (mean=4.291), adequacy of library facilities and materials promotes effective teaching and learning among students and thus improves their performance (mean=4.209), and that the capacity and resources in the library are adequate for the number of students in the school (mean=4.116). This depicts that library provides students with invaluable resources that enhance their coursework and research. The findings agree with a study by Rodrigues and Mandrekar (2020) who found that there was a significant and remarkable relationship between library usage and students' learning outcomes. Thus, there is a need to create awareness among students about resources and facilities that are available in the library so that students can take maximum advantage of the benefits provided by the library. Providing support to students to access resources in the library could play a significant role in helping students find useful and relevant resources within the library. A couple of factors contribute towards the productive usage of the library. These factors include; proper guidance by library staff on the use of the library resources, a conducive library environment and the opportunity to access the library resources when required (Rodrigues and Mandrekar, 2020).

The findings from the KIIs indicated that,

> *"……. libraries are seen as social institutions that are created to increase knowledge, preserve the cultural heritage and provide information to different users. The availability of books and other non-books help to improve students' academic success in schools. Libraries play an important role as a reliable and beneficial information provider in the students' academic success and performance. School libraries provide information in different formats to supplement the textbook so that learners can be able to have adequate information to do their work".*

The findings agree with a study by Todd and Carol (2010) who stated that library resources enable learners to critically analyse and organize information, problem-solving, and communicate their understanding. Studies have effectively shown that students who have access to library resources have the potential to achieve better learning outcomes than those who have little or no access to library resources. The utilization of school library information resources is key determinant in the provision of effective library services in schools. The provision of successful library services is based on satisfaction level of its users with relevant library information resources, library staff and user-centric library services. The students use of library help them to supplement their assignments and class notes and assist them positively in preparing them for examination. The findings agree with a study by Bimenyimana (2021) who reported that the availability of library services and their utilisation significantly enhanced the level of academic performance.

Correlation Analysis

The researcher performed a Pearson moment correlation on the study variable's association. The findings are shown in Table 5.

Table 4. Correlation Analysis

Correlations			
		Library resources	**Academic performance**
Library resources	Pearson Correlation	1	0.428
	Sig. (2-tailed)		0.003
	N	172	172
Academic performance	Pearson Correlation	0.428	1
	Sig. (2-tailed)	0.003	
	N	172	172
** Correlation is significant at the 0.01 level (2-tailed).			

According to the data presented in the table above, the study discovered a significant positive relationship between library resources and academic performance, (r=0.428, p=0.003). The findings of this study agree with findings of a study in Germany by Mischo and Maab (2013) that revealed that teaching and learning materials such library resources as well as material resources improved development of mathematical skills that led to acquisition of mathematics competencies. The findings of this study also confirmed the findings by Leone et al (2010) in USA who found out that, instructional materials created a favourable learning condition and a classroom climate that engaged learners in their learning. Their study revealed that a favourable classroom climate correlates to a positive attitude towards what is being engaged in, thus, positive results.

Conclusion

The study concluded that library provides students with invaluable resources that enhance their coursework and research and that there are adequate desktop computers to each learner which improves their learning. library provides students with invaluable resources that enhance their coursework and research. The study found that libraries are seen as social institutions that are created to increase knowledge, preserve the cultural heritage and provide information to different users. The study concluded that recruitment process, proper placement of teachers in schools, regular performance evaluation has positive influence on students' academic performance.

Recommendations of The Study

This study recommends resources mobilization by government and other stakeholders that include funding teaching and learning resources that is ICT because such facilities are inter-

related as critical enabler for better mathematics performance in secondary schools. The government should allocate more funds to equip physical facilities in schools which are either inadequate or completely lacking, also more funds should be allocated to equip schools with resource persons, field trips and excursions, internet facilities and recreational facilities, to avert charging parents levies for these resources. Also, specific subject rooms like agriculture room including laboratories should be equipped to enhance effective teaching and learning. TSC should employ more teachers to cater for the enormous teacher shortage, in service training programmes should also be initiated to address manpower needs as a result of changing times to enable teachers embrace use and access to computers and the internet and provision of e-materials. There is need for the formulation of a policy that mandates all the secondary schools to have library infrastructure and equipped with reading materials and internet availability.

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