Assessment of the School Resources Availability in Public Day Secondary Schools in Kenya: Case of Manga Sub-County

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ABSTRACT

Education is a human activity that fashions and models mankind for society. Thus, all educational stakeholders ought to combine forces towards realising quality education. This study assesses the availability of schools resources. The study was triggered by the ongoing trend of diminishing academic performance among students in day secondary schools in the Manga sub-county, posing complex questions that must be addressed. The study employed a descriptive survey research approach grounded in the Resource-Based Theory. The targeted population was 378 individuals, consisting of 351 teachers and 27 head teachers from 27-day schools in the Manga subcounty. A sample size of 299 was selected using simple random sampling. Questionnaires were used to collect data. Quantitative data was analysed using a descriptive survey approach. It was recommended that for effective learning and improved academic performance, the school administration should ensure that it has provided adequate school resources materials in all schools and that there is effective and efficient management of teaching-learning materials for the improved academic performance of the learner.

APA CITATION


CHICAGO CITATION


HARVARD CITATION


IEEE CITATION


MLA CITATION

INTRODUCTION

For many years, educational researchers have grappled with the significant variance in performance among public Day Schools in national examinations. Some schools have a consistent track record of excellence, while others continually fall short (Nyambane, 2012). Various scholars, including Feinstein and Symons (2001), have conducted studies that indicate that high-achieving schools typically employ specific strategies and have unique characteristics that facilitate academic success for their students.

These findings lead to the long-standing debate over the importance of instructional resources in students’ achievements. This argument has persisted for at least three decades, with some researchers, such as Dearden et al. (2002), exploring various facets of this complex issue.

This growing body of evidence suggests that the relationship between school instructional resources and academic achievement is multifaceted and requires a comprehensive understanding of how different elements interact. For educators, policymakers, and stakeholders, recognising the role of these resources not only provides insights into why some schools excel but offers guidance on how underperforming schools might improve. By further exploring and applying these identified characteristics and processes, it may be possible to foster a more equitable educational landscape where all students have the opportunity to reach their full academic potential.

In the United States of America, educators face the growing challenge of maintaining the nation’s education facilities. Therefore, academic achievement remains a concern among parents, teachers, and students, regardless of the stakeholders’ efforts, and this is likely due to the quality of the school resources. This is further shown by Boese & Shaw (2005), who also convicted school resources as factors influencing academic achievement in New York. Inadequate educational resources in urban and rural areas have been identified as a major contributor to Nigeria’s low academic performance, and the government has been urged to address the issue (Yara & Otieno, 2010).

In 1972, the government established the Kenya School Equipment Scheme (KSES), which was charged with procuring and distributing textbooks. This was a direct government involvement in purchasing textbooks increasingly produced by the private sector (Rotich, 2004). After that, in 2003, the Government of Kenya introduced universal Free Primary Education (FPE) and Free Day and Secondary Education (FDSE) programs, which solved one of the most critical problems in the education sector in the country: access to education. However, it soon became evident that whereas (the FDSE) program increased the enrolment rates, academic performance stagnated in many schools and Sub-Counties in Kenya due to effective school resources Education Sector Report. (2008), hence building a gap in the literature. Therefore, this study assessed the influence of school resources on student academic achievement in public day secondary schools in Kenya: the case of Manga Sub-County.

Purpose of the Study

This study aimed to assess school resources availability in public day secondary schools in Kenya: the case of Manga Sub-County. The following objectives guided the study:

LITERATURE REVIEW

Theoretical Review

The study was based on Resource-Based Theory (RBT). Originating from Wernerfelt's seminal paper in 1984, the Resource-Based Theory (RBT) has established itself as an influential framework, contributing vital perspectives in organisational management and strategic planning (Wernerfelt, 1984). The theory proposes that organisations can attain and sustain competitive advantage through the strategic utilisation and management of their internal resources, which are valuable, rare, inimitable, and non-substitutable (Barney, 1991). This study aims to extrapolate the principles of RBT to investigate how schools might harness...
their internal resources to enhance students’ academic performance, emphasising public secondary schools.

The core tenet of RBT is premised on the belief that firms leverage their internal resources to foster a competitive advantage in the market (Wernerfelt, 1984). Peteraf (1993) further underlined the significance of resources’ heterogeneity and immobility as pivotal in facilitating sustainable competitive advantages. Resources here encompass a firm’s assets, capabilities, processes, and information utilised to conceive and implement strategies that improve its efficiency and effectiveness (Barney, 1991). In the realm of educational institutions, resources like instructional and physical facilities, teacher expertise, and administrative structures stand out as pivotal in informing their competitive stance and, by extension, the academic achievement of their students.

**Empirical Review**

Making resource material is advantageous to the teacher, although it is meant to benefit the students. Pearson (2012) states that whilst making the resources, the participants develop their practical skills through practical tasks and gain a real understanding of designing, how things work, and how they can be put together. The problems colleagues and students encounter back in their schools. Schools have the necessary resource materials made, but seldom do teachers use them. Adriana (2006) notes that some schools may have the resources, but using them is impossible. They may not even know their existence. It has been a tradition in the past that resource materials were rarely used. NEC (2012) laments the former; thus, in the past, the only visual aid available for teachers to use in the classroom was a fixed portable blackboard. Very rarely, teachers, with the help of some brilliant students, used to prepare handwritten charts for display on the classroom walls. Once hung in place, they were there for years, and their efficacy, purpose and usefulness were virtually eroded.

According to Tony (2011), the public school system has benefited from the efforts to offer resources via the Free Day and Secondary Education (FDSE) program. Although findings indicate that resource materials such as textbooks and other reference materials are available, concerns are raised about the quality of the recommended materials, some of which have factual errors, inconsistent information, inaccuracies and poor or difficult language for the learner. Furthermore, the lack of comprehensive monitoring and audit mechanisms threatens the purchase, utilisation, and durability of resources in schools. Regarding resource centres’ presence and use, Adriana (2006) notes that some teachers have repeatedly reported that their schools have computer labs that are more of a ’sanctuary’ than a learning resource centre for students’. These resources are well-locked, and equipment is hardly in use. Kiio (unpublished sources) highlights the common excuses for teachers not using teaching resources that are difficult to obtain and expensive. Some teachers claimed it was tiresome to make the teaching aids due to overwhelming duties around the teaching profession.

The development of modern teaching has revolutionised the school system at every functional level. NCE (2009) further states that teaching is no longer restricted to delivering boring facts. It has changed into a lively and inspiring means of mutual communication. Teachers are always looking for suitable resource materials to enhance effective interaction and achieve the curriculum objectives. Print media has largely remained an indispensable tool that is popularly used. Teachers in contemporary education often utilise media they do not create to enhance their teaching practices, as Branham et al. (2004) emphasised. The crafting of educational media, whether it be editing video content, developing advanced transparencies, or programming computer software, demands a significant investment in time, technology, and enthusiasm. According to Owoeye and Yara (2010), a teacher has to choose and utilise a broad array of materials in the classroom since students’
interests and talents vary. KIE (2010) suggests that some new dimensions of teaching aid through the provision of necessary infrastructure and e-learning materials are an urgent need that should go hand in hand with adequate training of teachers in the use of ICT. This ensures that the education sector is prepared to move the country towards attaining the targets outlined in Vision 2030.

We appreciate the Kenyan government's unswerving commitment to providing students with educational materials via the Ministry of Education. Most institutions often delay these essential educational tools, forcing parents to pay for them out of pocket. When this occurs, it is safe to assume that students can only learn what they are taught. Suppose the educator is the sole point of contact. In that case, his choice of textbook might be influenced by his prejudices in the sense that he may have made his choice based on less-than-ideal factors, including the piece's visual appeal (in terms of colour, print, image), the writer's credentials, and the acclaim he has bestowed on earlier works (Owoeye and Yara, 2010). When helping students improve their grades, public tests fall short (Nzomo 2010).

Kenyan research UNESCO. (2013). shows that schools struggle to define their purpose. A 2008 study by the Kenya Education Management Capacity Assessment (KEMACA) revealed a lack of strategic planning within the Kenyan educational system. According to the study, almost a third (27%) of schools in Kenya do not practice strategic planning, and among those that claim to, less than half (49%) can present the strategic plans they purport to have developed. KEMACA's report concluded that mission and vision statements within Kenyan schools are often too general, lacking a precise focus on tangible outputs and outcomes. Supporting this finding, research by Onsomu et al. (2004) also indicates a widespread absence of strategic planning among schools.

The unique nature of school subject matter content should be addressed. Each subject has a unique, specific nature. This has significance for the use of resource materials in a particular subject. Certain subjects deal especially with subject-object relationships, for instance, the natural sciences, geography and professional-technical subjects. Here, the students have to deal with a natural phenomenon object, among others. In teaching this content, it is obvious that since the aspect now being considered regards the unique nature of the subject (and thus the content), it is necessary to briefly refer again to the reduction of the content and teaching aids.

Otieno (2012) states that teachers neither use the local resources materials as teaching laboratories nor refer to them in their lessons as expected. The researcher further argues that many teaching aids, mostly audiovisual, are used as the cost prohibiting schools from buying them. Teachers and students could prepare them; however, other resource materials, such as dioramas, sculptures, and puppets, were not used. Most teachers use posters for teaching, but the types of posters are mostly teacher-made. Also, very few posters are supplied by the ministry or donated by other governmental organisations or individuals. Schools have few teacher-made and student resources. The Ministry of Education supplies very few teaching materials to schools. Most resource materials are expected to be purchased by the schools, but due to financial constraints, schools end up without them, however essential they could be. Further notes that, while cost, durability and simplicity are given priority when choosing resources, materials' effectiveness and size are not considered by most science teachers.

Resource materials, although similar, could be used differently by teachers from the same training and in similar subjects. Onsomu et al. (2004) states that teachers at community schools buy syllabus, teaching guides and other pedagogical materials approved by the Kenya Institute of Education (KIE). It remains the schools' and teachers' prerogative to devise, make and use different instructional resource materials. This has risen from the following factors; like in other fields, change is dynamic in teaching. Harford & Baird (2016) report that the 'chalk and talk' method of teaching curriculum subjects,
where the teacher talks and the students listen, is gradually being changed to 'learning by doing' or discovery methods. In discovery methods, the teacher creates opportunities for the students to find knowledge through, for example, project work, doing experiments, and so on.

Adegbemile (2011) argues that with modern approaches to education requiring teachers to adapt information communication technologies (ICTs) to enhance efficiency, schools can no longer ignore technology in implementing the curriculum. Nicky (2010) highlights the crucial role of choosing teaching and learning materials in the curriculum development and implementation process at both primary and secondary school levels. Young learners are exposed to diverse materials daily, spanning print, visual, and multimedia formats. Kothari (2003) further states that the Institute also develops education programs for schools to broadcast and evaluate curriculum support materials for use in schools and teacher orientation. Wosyanju (2010) notes that KIE is responsible for conducting research and evaluation in education and training developing learning resources, including books, manuals, and multimedia resources. The publication of books is given to KIE and KICD.

RESEARCH METHODOLOGY AND DESIGN

Study design

The research utilised a descriptive survey approach to investigate how school instructional resources influence students' academic success in public day secondary schools within Manga Sub-County. As stated by Mugenda and Mugenda (2003), this type of design is valuable for collecting information at a specific moment, aiming to depict the current circumstances and conditions and to contrast them with established standards.

Study Location

The study was conducted in public day secondary schools in Manga Sub-County within Nyamira County, Kenya. The Sub-County is selected for study because it has been affected by poor performance posted by the many Days Secondary Schools in KCSE (Sub-County Office Manga Sub-County, 2020).

Sample Size and Sampling Procedures

Sample Size

The sample size for this study was ascertained through the Krejcie & Morgan table from 1970, based on Table 3, which aimed at a population of 378 educators, including 351 teachers and 27 head teachers, resulting in a sample size of 299 individuals.

Sampling Procedures

Sampling, as defined by Mugenda and Mugenda (2003), is the procedure by which a certain number of individuals are picked from a broader population that those individuals are meant to represent. Teachers and principals were selected using a random sampling technique for this research. This method is vital as it prevents the confusion of specific factors that hold significance in the research (Owoeye, 2014).

Table 1: Sample size for each category

<table>
<thead>
<tr>
<th>Staff category</th>
<th>Population size</th>
<th>( n_i = \frac{(N_i \times n)}{N} )</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headteachers</td>
<td>27</td>
<td>( \frac{(27 \times 214)}{378} )</td>
<td>21</td>
</tr>
<tr>
<td>Teachers</td>
<td>351</td>
<td>( \frac{(351 \times 214)}{378} )</td>
<td>278</td>
</tr>
<tr>
<td>Total</td>
<td>378</td>
<td>( \frac{(378 \times 214)}{378} )</td>
<td>299</td>
</tr>
</tbody>
</table>

Source: Researcher (2023)

Data Collection Procedures

Questionnaires were used to collect data. Following the endorsement of the proposal by the School of Postgraduate at Mount Kenya University, the researcher secured a letter that allowed obtaining a permit from the National Commission for Science, Technology and Innovation (NACOSTI) to conduct the research. With the permit, the researcher made preliminary
visits to all relevant locations and scheduled appointments with the appropriate authorities.

To facilitate the data collection process, the researcher enlisted the help of two research assistants responsible for administering the questionnaires. This collaborative approach ensured that the research was conducted systematically and efficiently, adhering to all the necessary regulations and guidelines and maximising the accuracy and relevancy of the collected data.

RESEARCH FINDINGS

The focus of the investigation was to evaluate and investigate how instructional resources impact student academic success in the schools.

Questionnaire Response Rate

The results in Table 2 show a questionnaire return rate of 280(94%), including 21 head teachers and 280 teachers.

<table>
<thead>
<tr>
<th>Employees</th>
<th>Sample size</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headteachers</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Teachers</td>
<td>278</td>
<td>269</td>
</tr>
<tr>
<td>Total</td>
<td>299</td>
<td>280</td>
</tr>
</tbody>
</table>

Source: Field Data (2023)

Demographic and General Information

The result shows the demographic and general information of the respondents, where 200 (71%) of the respondents were male while 80 (29%) were female. Out of the 280 respondents, 90 (32%) were between the age of 25-34 years, 150 (54%) were above 48 years and 40(14%) were between 18-24 years. In terms of working experience, 200 (71%) had over 5 years of working experience, 50(18%) had between 3-5 years, and only 30(11%) had between 1-2 years of working experience. Education-wise, 218(78%) of the respondents had Bachelor’s degree qualification, 34(12%) had diploma, 26(9%) had masters while only 2(1%) had PhD.

Instructional Resources

The results in Table 3 show that the respondents agree (mean 4.00) that ICT infrastructure improves the engagement of teachers and learners in modern forms of knowledge acquisition, textbooks and notes books make students excellent in academic outcomes, and that teaching aids mostly audiovisual enhance the resilience of learners to life.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT infrastructure improves the engagement of teachers and learners in modern forms of knowledge acquisition</td>
<td>4.111</td>
<td>.352</td>
</tr>
<tr>
<td>Textbooks and notes books make students excellent in academic outcomes</td>
<td>4.232</td>
<td>.456</td>
</tr>
<tr>
<td>Teaching aids, mostly audiovisual, enhance the resilience of learners to life</td>
<td>4.000</td>
<td>.335</td>
</tr>
</tbody>
</table>

Source: Field Data (2023)

Physical Facilities

The results in Table 4 show the respondents agree (mean 4.000) that school building design enhances teachers’ retention, hence improved academic achievement; laboratories promote practical work. Hence, enhanced academic achievement and conducive classrooms promote teachers’ and students’ attitudes toward academic achievement.
### Table 4: Influence of physical facilities availability

<table>
<thead>
<tr>
<th>Statements</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>School building design enhance teachers and students’ retention</td>
<td>4.003</td>
<td>.142</td>
</tr>
<tr>
<td>Laboratories promote practical work, hence enhancing academic achievement</td>
<td>4.142</td>
<td>.234</td>
</tr>
<tr>
<td>Conducive classrooms promote teachers’ and students’ attitudes.</td>
<td>4.432</td>
<td>.249</td>
</tr>
</tbody>
</table>

**Source:** Field Data (2023)

### Human Resources

The results in Table 5 show the respondents agree (mean 4.00) that teachers' professional discharge of duties increases the quality of education and hence academic achievement; school administrators that can organise the process of teaching and learning to promote the school mission, enhance academic achievement and teachers experience, knowledge and teaching skills enhance their effectiveness, hence improved academic achievement.

### Table 5: Influence of human resources availability

<table>
<thead>
<tr>
<th>Statements</th>
<th>Mean</th>
<th>Std. dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ professional discharge of duties increases the quality of education.</td>
<td>4.256</td>
<td>.234</td>
</tr>
<tr>
<td>School administrators can organise the process of teaching and learning to promote the school mission, enhance academic achievement</td>
<td>4.427</td>
<td>.396</td>
</tr>
<tr>
<td>Teachers’ experience, knowledge and teaching skills enhance their effectiveness.</td>
<td>4.409</td>
<td>.309</td>
</tr>
</tbody>
</table>

**Source:** Field Data (2023)

### Financial Resources

The study established that the respondents agree at a mean of (4.00) that financial resources influenced instructional, physical, and human resources in equal measure. School financial resources increase teacher motivation, hence improved academic performance. Availability of finances enhances the purchase of instructional resources, thus improving academic performance. Also, the financial stability of a school aids in the proper remuneration of school workers, hence improving academic achievement.

### Table 6: Influence of financial resources availability

<table>
<thead>
<tr>
<th>Statements</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<tr>
<td>Financial resources aid in the proper remuneration of school workers.</td>
<td>4.409</td>
<td>.309</td>
</tr>
</tbody>
</table>

**Source:** Field Data (2023)

### DISCUSSION

This sentiment, characterised by a mean agreement of 4.00 in one study, underscores the criticality of ICT not just as an educational tool but as a catalyst for enhancing and modernising pedagogical interaction and student engagement.

While ICT takes a front seat in the modern educational dialogue, the significance of traditional elements such as textbooks and meticulously prepared notes invariably asserts itself, especially when focusing on student excellence in various academic outcomes. Prior research highlights an intriguing intersection between textbooks and academic accomplishment. Notably, in a longitudinal investigation in Thailand, spearheaded by Lockheed and his team in the mid-1980s, the potential impact of textbooks was illuminated, revealing their capability to influence achievement, at times acting as a proxy for additional post-secondary education for educators and facilitating the delivery of an enriched, comprehensive curriculum.

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In a retrospective glance at scholarly contributions, the sentiment expressed by Altbach in the early 1980s magnifies the timeless relevance of printed material in the educational trajectory. Altbach vehemently argued that the supremacy of the printed word in the educational process is unparalleled, thereby establishing textbooks as an immutable, central asset across all educational levels. In an empirical escapade involving a significant number of primary school students, Fuller (1985) unearthed that students who engaged with multiple textbooks exhibited a strikingly higher likelihood of passing graduation examinations in comparison to their counterparts devoid of such textual resources. The impact of the school library is truly meaningful only when it is perpetually accessible to students for a significant duration during a school day. Simultaneously, in the modern educational context, where innovative approaches necessitate the integration of ICT to amplify efficiency, schools cannot afford to neglect technology in the curriculum's implementation. Kothari (2003) vehemently argues for the seamless incorporation of ICT and the selection of apt teaching and learning materials as integral components of curriculum planning and delivery across various educational levels. Thus, combining traditional and modern educational resources and methodologies paints a holistic picture of a rich, multifaceted educational framework. ICT infrastructure, textbooks, teaching aids, and resource utilisation coalesce to sculpt students' educational experiences and outcomes.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study established that the number of students joining secondary schools had declined in the past five years (2016-2020); there was a decrease in KCSE mean grade in the past five years (2016-2020); there was a deterioration in school ranking in the past five years (2016-2020) and that there has been a decline in subject mean score in the past five years (2016-2020). Efforts were made to provide various physical facilities within the school, including power supply, classroom furniture, staffroom furnishings, and access to clean water. However, the provision of certain facilities, notably science laboratories, departmental offices, latrines, library resources, playgrounds, Home Science/Agriculture infrastructure, and dining hall amenities, fell short of expectations.

As noted by Okong'o et al. (2015), the physical conditions and organisation of a school can significantly influence the cultivation of a culture conducive to success, ultimately impacting students' academic achievement. It is essential to recognise that the absence or insufficiency of physical resources can undermine the effectiveness of the educational experience (Bizimana & Orodho, 2014), leading to subpar academic performance among learners. Importantly, the study revealed that using educational resources in the teaching and learning process positively correlated with students' academic achievement. His study established that the number of students joining universities and other tertiary colleges had declined in the past five years (2016-2020); there was a decrease in KCSE mean grade in the past five years (2016-2020); there was a deterioration in school ranking in the past five years (2016-2020) and that there has been a decline in subject mean score in the past five years (2016-2020). The study also established that instructional resources, physical facilities, human resources and financial resources influence a student's academic achievement in public day secondary schools. Importantly, the study revealed that using educational resources in the teaching and learning process positively correlated with students' academic achievement.

Recommendations

For effective learning and improved academic performance, the school administration should ensure that it has provided adequate instruction materials in all schools.

The study recommended that the improvement and availability of these important resources be
given top priority by educational officials and school managers. The creation of a good learning setting and the improvement of students' academic achievement can be greatly aided by adequate spending in these areas. According to the study, there is a link between students' academic achievement and using educational tools in the teaching and learning process. So, it is recommended that schools concentrate on encouraging students to make good use of the already available instructional resources. This could mean teachers teaching new and interesting ways to use resources in the classroom, ensuring all students can get the tools they need, and encouraging a culture of creativity in the school. Additionally, regular evaluations of resource use can be carried out to find areas that need growth and more funding. Similar studies will be undertaken in other regions to establish if the situation is similar across the country.

REFERENCES


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