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Exploring the Effect of Learning Resource Availability on Student Outcomes in Makueni County: An in-Depth Analysis

By

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Abstract

The implementation of CBC has faced a lot of challenges since its adoption and has generally failed to achieve its intended outcomes among learners. For instance, lack of sufficient class learning and teaching materials and not enough quality textbooks and inadequate human resource remains a challenge in the implementation of the competency-based curriculum. In light of the foregoing, this study sought to explore the effect of availability of learning resources on learners' outcomes in Makueni County. The study was anchored on Advocacy Coalition Framework; Descriptive survey research design was preferred for this study. Interpretivist philosophical paradigm informed the study. A total of 903 Grade 6 teachers from public primary schools in Makueni, 903 class 6 PTA representatives, 903 chairpersons of public primary schools' Boards of Management, 41 Curriculum Support Officers, and 9 sub-county directors of education were targeted. A total of 349 respondents were sampled representing the subgroups in the target group. Primary data was gathered from the field by use of a semi structured questionnaire and an interview guide. Quantitative data underwent descriptive, regression, and inferential analyses, whereas qualitative data was subjected to thematic analysis. The findings revealed that the availability of learning resources plays a significant role in shaping learners' outcomes in Makueni County, as indicated by R-squared of 0.584. This indicates that 58.4% of the variation in learners' outcomes was explained by the availability of learning resources. Additionally, the study found a positive and significant relationship between learning resource availability and learner outcomes ($\beta=0.669$, $p=0.000<0.05$). The study concludes that access to quality learning materials and facilities forms the backbone of an effective educational system in the County. In view of the findings, the study recommends that management in the education sector should prioritize the allocation of learning resources in Makueni County schools, focusing on areas with the highest dissatisfaction rates.

Keywords: Learning Resources, Student Outcomes, Educational Impact, Resource Availability, Makueni County

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Introduction

The idea of a "learning outcome" is frequently defined as "educational attainment" or "academic accomplishment," denoting the overall efficiency and consequences achieved through the educational process within educational institutions. These achievements are typically expressed in numerical or value-based terms through achievement tests (Briggs, 1979: 147). Gagne and Driscoll (1988: 36) stated that learning outcomes are the observable results of students' learning abilities and can be identified through their performance and appearance. Reigeluth (1983) classified the classification of learning into three factors: the situational factor, the procedural factor, and the outcome factor. The outcome factor includes all the outcomes that act as signs of the efficiency of learning approaches in diverse situations (Degeng, 1989). Furthermore, Gagne and Briggs (1979: 49-50) identified five groupings of learning results, encompassing cognitive abilities, thinking strategies, spoken information, physical abilities, and outlooks. Reigeluth (1983: 15) proposed that learning outcome can also be seen as a result that assesses the effectiveness of different methods or strategies in varying circumstances. Additionally, Riegeluth (1983: 94) stated that learning outcomes specifically refer to the performance that indicates the acquired capabilities. The outcomes of learning are always expressed through specific behavioural objectives.

Numerous elements constituting both internal and external aspects, contribute to learning outcomes, As Suryabrata (2012:27) noted, internal factors pertain to physiological and psychological elements like intellect, motivation to achieve, and cognitive aptitude. External factors, on the other hand, consist of environmental and instrumental elements such as teachers, curriculum, and learning models. The impact of curriculum on learning outcomes has been widely recognized in educational research. Studies by Hattie and Yates (2014) and Darling-Hammond (2017) highlighted the important role curriculum design and implementation play in improving student learning outcomes. They emphasized the need for rigorous curriculum development, clear learning objectives, and alignment with educational goals. Anderson and Stillman (2013) further amplified the importance of curriculum in mathematics education, advocating for coherent content sequencing and appropriate instructional strategies.

On a global scale, the focus on learning outcomes has gained prominence as part of educational reform efforts. International organizations, such as UNESCO (United Nations Educational, Scientific and Cultural Organization) and OECD (Organization for Economic Cooperation and Development), have been actively involved in promoting the use of learning outcomes as a means to enhance the quality and relevance of education worldwide. The use of standardized learning outcomes frameworks, such as the European Qualifications Framework (EQF) or the Qualifications Frameworks developed by individual countries, helps establish

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comparability and transparency in educational achievements across borders. This allows for better recognition of qualifications and facilitates lifelong learning and educational mobility for individuals.

In the African context, the focus on learning outcomes is of utmost importance in the pursuit of quality education and sustainable development. Education systems across the continent are increasingly recognizing the significance of learning outcomes as a means to address the unique challenges and opportunities present in African societies. One key aspect of learning outcomes in the African context is the need to align education with the development priorities of the continent. African countries are striving to achieve the United Nations Sustainable Development Goals (SDGs), which itemize a range of economic, social, and environmental objectives with SDG No. 4 focussed on quality education. Learning outcomes are seen as a tool to ensure that education contributes to these broader development aspirations, by equipping learners with the knowledge, skills, and values necessary for sustainable development.

In the Kenyan context, learning outcomes play a significant role in shaping the education system and guiding educational practices. The government and educational stakeholders in Kenya acknowledge the importance of setting clear learning outcomes to ensure quality education and improve student achievement. One key aspect of learning outcomes in the Kenyan context is the alignment with the national curriculum framework. Kenya has implemented a competency-based curriculum that emphasizes the development of skills, knowledge, attitudes, and values. Learning outcomes are designed to reflect the desired competencies that learners should acquire at each stage of their education. This includes not just knowledge specific to the subject but also more general abilities like critical reasoning, finding solutions, effective communication, teamwork, and innovative thinking.

Suryawati and Osman (2018) asserted that in the CBC, broad areas of learning are deemed vital and crucial for the creation of skills since abilities essentially evolve in situations. Teachers therefore should find it effective to channel their teaching towards the promotion of quality education rather than directing efforts only towards the excellence of students, as well as performance in written examinations (Bajis, Chaar, Penm, & Moles, 2016). The economic downturn triggered by high levels of youth unemployment in the United Kingdom compelled the adoption of the CBC concept in European countries (Castanho, et al., 2017). The primary point of contention was the education system that was deemed responsible for the insufficient acquisition of essential skills among students graduating from schools. Consequently, significant advancements have been made in the European education system. In contrast, shortcomings in the skillset of the workforce due to economic shifts and rapid technological advancements prompted the implementation of CBC in Australia in 1990 (Smith, 1996).

In April 2015, Rwanda adopted a Competency-Based Curriculum (CBC) as a means to transform education. The aim was to ensure that learning becomes deep, enjoyable, and fosters the development of habits that lead to high levels of achievement. This new curriculum has been praised for its shift away from heavy academic content to a more practical and skills-oriented approach. It is designed to be more relevant to real-world working environments and daily life, as highlighted by the REB in 2015. Cheptoo (2019) notes that the curriculum framework bridges the gap between theoretical knowledge and practical application, aiming to enhance graduates' capabilities and job-ready skills. Schools that implemented CBC techniques saw positive

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outcomes such as improved student engagement, better attendance rates, and increased pass rates.

The execution of the CBC has encountered a range of problems, notably; insufficiencies in educational resources and subpar textbooks, posing a challenge in effectively carrying out the proficiency-based curriculum. Researchers, like Momanyi and Rop (2020), along with Ondimu (2018), assert that gaps have arisen during the preparation of educational materials, leading to delays in book publication. As a result, accessing specific textbooks for grade levels becomes problematic, casting a negative impact on the curriculum's implementation. This situation causes frustration for both stakeholders and instructors who require these essential resources for the learners. Additionally, a lack of adequate human resources stands as another obstacle in implementing the curriculum based on proficiency. The persistent issue of teacher understaffing in Kenya's public schools' education system has been recognized by the Teachers Service Commission. As highlighted by Onyango (2020), there is a substantial cumulative shortage of around fifty thousand teachers in primary schools nationwide alone.

The effective execution of CBC relies not only on the classroom instructor who facilitates the learning process but also on the participation of parents. This is because specific elements of the curriculum extend beyond the confines of the school environment. Parents are anticipated to play a significant role in their children's academic achievements by establishing a supportive atmosphere that promotes learning. They should motivate students to realize their potential by finishing assigned tasks, supervise and aid them with their homework, and provide essential tools for hands-on activities. Additionally, parents are required to collect evidence of their children completing assignments assigned by teachers, and accurately input their children's details into the Kenya early years' assessment database. Many of them are of the opinion that they have not been sensitized as parents. Further, the fact that some learners are in boarding schools compounds the problem since the parent only gets to interact with their children during the holidays. While these challenges could affect learner's outcome, there is hardly any scholarly evidence to show this, therefore, this study seeks to fill this gap by assessing how the effectiveness of the implementation of CBC curriculum is influencing the learners' outcome in Makueni County with view of generalizing the study findings.

Statement of the Problem

The implementation of CBC has faced a lot of challenges since its adoption and has generally failed to achieve its intended outcomes among learners. For instance, lack of sufficient class learning and teaching materials and not enough quality textbooks (Momanyi and Rop (2019) and Ondimu (2018), inadequate human resource (Onyango, 2020), lack of parental support, large class sizes, and curriculum structure (Amunga et al., 2020) and inadequate digital literacy skills remains a challenge in the implementation of the competency-based curriculum. The success in the implementation of the CBC curriculum is tied to availability of learning resources, CBC supporting infrastructure, teacher preparations, teaching methodologies and assessment criteria and this may vary from one location to another due to access of information. The Kenya government, through the national curriculum policy 2018, pronounced its mandate in provision of learning resource, CBC supporting infrastructure, teacher preparations, teaching methodologies and assessment criteria. However, the effectiveness in provision of this policy

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support and its effect on learner's outcome in Makueni County warranted a thorough investigation. This study sought to explore the effect of availability of learning resources on learners' outcomes in Makueni County.

Research Objective

To assess the effect of availability of learning resources on learners' outcomes in Makueni County.

Theoretical Framework

This study was underpinned by Advocacy Coalition Framework. The Advocacy Coalition Framework (ACF) was developed by Paul A. Sabatier and Hank Jenkins-Smith as a model to address complex challenges, often referred to as "wicked" problems, within the realm of public policy. These problems are characterized by significant conflicts in goals, the prominence of technical disagreements, and the involvement of various stakeholders from different governmental tiers (Sabatier & Weible, 2007). The ACF operates on the premise that the processes of devising and executing policies in contemporary societies are intricate and multifaceted, that participants must mobilize both within and outside of themselves if they are to have any hope of influencing policy outcomes. Critics argue that the ACF oversimplifies the actors involved in policy borrowing within education. It tends to assume homogeneity within advocacy coalitions and overlooks internal divisions, power struggles, and the intricate nuances of individual beliefs and preferences (Sabatier & Jenkins-Smith, 1993; Howlett & Rayner, 2013). A study by Sabatier and Jenkins-Smith (1993) on policy change and learning highlighted the need to consider a broader range of perspectives within advocacy coalitions to provide a more accurate understanding of policy borrowing processes in education.

Also, the ACF may not sufficiently account for external influences on policy borrowing in education. While it focuses on internal coalition processes, it often neglects the broader political, economic, and social contexts that shape policy outcomes. Understanding these external factors is crucial in comprehending the dynamics of policy borrowing in education (Weible et al., 2009; Steiner-Khamsi, 2006). Weible, Sabatier, and McQueen (2009) argue for the inclusion of external influences to enhance the applicability of the ACF and provide a more comprehensive analysis of policy borrowing.

The ACF's applicability across different policy contexts in education may be limited. Its effectiveness in explaining policy change through borrowing may vary depending on the level of fragmentation or contentiousness within the education sector. Weible and Sabatier (2005) note that policy networks in education can differ significantly, and the ACF may require modifications to better capture the complexities of policy borrowing in diverse educational settings. Additionally, Dolowitz and Marsh (1996) emphasize the importance of considering the specific institutional and cultural contexts in policy borrowing processes in education. This phenomenon of specialization takes place within policy subsystems, which consist of individuals who consistently strive to impact policy within that particular subsystem, such as Teacher's unions- like KNUT and KUPPET, Teacher Service Commission, Parents' Associations among other formations in the education sector. In this study, ACF was considered applicable to the extent that it aims to establish how collective belief systems among major stakeholders (with

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their different and often conflicting beliefs) in relation to the introduction of the Competency-Based Curriculum policy has an impact on the educational achievements of learners attending public primary schools.

Literature Review

The literature review is based on the Learner's outcome and the availability of learning resources on learner's outcomes.

Learners' Outcomes

Zalina and Ahmad Faizal (2021) presented an empirical study on the effectiveness of a competence-based curriculum in Malaysian higher education institutions. The purpose of their study was to estimate the impact of proficiency-based curriculum on students' learning outcomes, their satisfaction with the program, and their perception of the program's relevance to their future careers. The authors conducted a survey among 365 students who were enrolled in four Malaysian higher education institutions. The information was examined through the application of descriptive and inferential statistical techniques, which encompassed correlation and regression analyses. The findings of the investigation indicated that the curriculum structured around competence had a beneficial influence on students' educational achievements, contentment with the program, and perception of its applicability to their prospective professions. Moreover, the research identified a notable and positive connection between the execution of the competence-based curriculum and students' learning achievements. Also, the study found that students who were exposed to a competence-based curriculum were more satisfied with the program and perceived it to be more relevant to their future careers compared to those who were not exposed to it. The authors attributed these findings to the fact that competence-based curriculum focuses on the development of practical skills and knowledge, which are more relevant to students' future careers.

Misbah, Gulikers, Dharma, and Mulder (2020) conducted a study to evaluate the effectiveness of competence-based vocational education (CBVE) in Indonesia. The researchers used a mixed-methods approach, combining a survey with open-ended questions and interviews with key stakeholders, including teachers, students, and employers. The study involved 580 students from seven vocational schools in Indonesia who were enrolled in four different CBVE programs: tourism, hospitality, automotive technology, and electronics. The survey assessed the students' perceptions of their learning experiences and the development of their competencies. The interviews and open-ended questions provided additional insights into the challenges and successes of CBVE implementation. The study findings showed that CBVE had a positive impact on students' learning experiences and competencies. The majority of the students reported that they had developed the required competencies for their chosen program and that they felt prepared for the workforce. Additionally, employers reported that CBVE graduates had better technical and soft skills than non-CBVE graduates.

Banchiamlak (2021) carried out research in Ethiopia with the aim of examining how a competency-focused curriculum impacts the improvement of student achievements within Technical and Vocational Education and Training (TVET) establishments in the country. The study employed a quasi-experimental research design to compare the learner outcomes of

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students who studied under the traditional curriculum and those who studied under the competence-based curriculum. The study's sample consisted of 323 TVET students from two selected institutions in Ethiopia. The findings of the study revealed that the competence-based curriculum has a significant positive impact on learner outcomes in TVET institutions in Ethiopia. Students who studied under the competence-based curriculum demonstrated higher levels of knowledge and skills acquisition, better problem-solving abilities, and increased self-confidence compared to their counterparts who studied under the traditional curriculum. Furthermore, the research discovered that the adoption of the competency-driven curriculum has led to alterations in how teaching and learning are conducted. This includes a transition from an instructor-focused approach to one centered around the learners, the integration of real-world encounters into the learning journey, and the utilization of evaluation methods that prioritize students.

Availability Of Learning Resources On Learners' Outcomes

Teaching aids and educational resources play a crucial role in nurturing personal characteristics, societal roles, and academic proficiencies in students. These materials can be customized to support endeavours related to career advancement, emphasizing aspects like accountability and effective task management. They also encompass enhancing skills like self-motivation, making choices, addressing challenges, and speaking up for oneself. Furthermore, these resources contribute to acquiring abilities for living independently, fostering better relationships with others, enjoying leisure activities, mastering transportation logistics, refining classroom conduct, and refining social interaction capabilities (Mynbayeva, Sadvakassova & Akshalova, 2018).

Alameddine and Makarem (2021) carried out a study with the aim of exploring how competency-based education (CBE) influences student success within the United States. Their research involved conducting a methodical analysis of existing literature on CBE within the US context, with a specific emphasis on studies that delved into the consequences of CBE on student accomplishments. The authors found that CBE has a positive effect on student achievement, particularly for low-performing students. The authors attribute this to the individualized and flexible nature of CBE, which allows students to learn at their own pace and focus on the competencies they need to master. The authors also suggest that CBE may be particularly effective for students who are disengaged or disconnected from traditional educational models. The authors note that there are still some challenges to implementing CBE effectively, including the need for well-designed and high-quality resources, the need for effective assessment and feedback mechanisms, and the need for adequate teacher training and support. However, the authors suggested that the positive impact of CBE on student achievement makes it a promising approach for improving educational outcomes in the US.

Thomas Bossuroy, Clara Delavallade, and Eliana La Ferrara (2021) conducted a study that investigated the impact of school library resources on learning outcomes in rural Ugandan primary schools. The study was based on a randomized controlled trial conducted in 80 rural primary schools in Uganda. The authors found that the availability of school library resources has a positive impact on learning outcomes, particularly in reading and math. Specifically, the study found that providing school libraries with additional resources, including books, textbooks, and other materials, resulted in significant improvements in students' reading and math scores.

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The study also found that the impact of school library resources was more significant for girls than boys. This finding suggests that school libraries may be particularly important in promoting gender equity in education in Uganda. Overall, the study highlighted the important role that school libraries can play in promoting learning outcomes, especially in resource-constrained contexts. The findings of the study have important implications for policymakers and practitioners who are interested in improving education outcomes in rural areas of Uganda and other similar contexts.

In Kenya's community colleges, Kigwilu and Akala (2017) investigated the use of resources in implementing the curriculum. In order to gather information from 120 respondents—principals, curriculum experts, lecturers, and heads of departments from 12 community colleges in Kenya—the authors used a descriptive survey approach. The research project sought to examine the impact of the use of resources on the delivery of curriculum as well as the access and utilization of resources for curriculum execution in community colleges. The results indicate that community colleges are facing various challenges in resource utilization, such as inadequate funding, lack of qualified personnel, and insufficient instructional resources. These challenges have led to ineffective implementation of the curriculum, which negatively affects the quality of education provided by community colleges.

Research Methodology

This study adopted interpretivism philosophical paradigm as best suited for this study. It was important for this study since it allowed the scrutiny of quantitative and qualitative data sets while interpreting resultant data beyond their face value (Yanow, 2007). The research adopted a descriptive survey design to depict how effectively the implementation of a competency-based curriculum influences the outcomes of learners. The study targeted public primary schools in Makueni County. A pilot study was conducted in Kitui County. According to Makueni County Integrated Development Plan (CIDP 2022-2027), the County has an average population density of 186 persons per Km². The region is split into nine sub-counties under the jurisdiction of the national government (Kathonzweni, Kibwezi, Kilungu, Makindu, Makueni, Mbooni East, Mbooni West, Mukaa, and Nzau), alongside an additional six sub-counties governed by the county government, which align with the parliamentary constituencies: Mbooni, Kibwezi East, Kibwezi West, Kaiti, Kilome, each of which is subsequently divided into 30 electoral wards. Makueni County is a member of the Southeastern Kenya Block (SEKEB) alongside Kitui and Machakos Counties.

The study targeted Grade 6 primary school teachers for the year 2022. This is because they were mostly involved in accompanying the first cohort of learners in their transition to junior secondary schools. Makueni County has a total population of 903 primary schools. Therefore, 903 class teachers formed the target population among the teachers. Stakeholders that included an additional 903 chairpersons of Board of Management and an equivalent number of PTA representatives were drawn from each primary school. Further, the target population also included the 41 Curriculum Support Officers and 9 sub-County Directors of Education in Makueni County (County Director of Education's office, 2023). Slovin's formula (1960) was used to obtain the desired sample size for the target population. The targeted population of 903

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Grade 6 teachers and 903 Chairpersons of Board of Management, 903 PTA representatives, totalling to 2709 is computed as demonstrated below:

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

In the context of determining sample size for a study, the variables were defined as follows: n represents the intended sample size, N stands for the size of the population being studied, and e signifies the significance level, which indicates the researcher's acceptable margin of error during the sample size estimation, set at 0.1.

$$n = \frac{2709}{1 + (2709 * 0.05^2)} = 348.54 \quad \text{Thus, } n \approx 349$$

Thus, a total of 117 Grade 6 teachers, 117 PTA representatives and 117 Chairpersons of Board of Management were included in the sample. In addition, since the population of the Curriculum Support Officers (41) and Sub County Directors (9) of Education is relatively small, a census was undertaken. Thus, all the 50 of them were included in the sample. The researcher employed simple random sampling technique to identify the selected schools. This is a random sampling method of selecting n participants within N units constituting the population in a study (Kothari, 2004). To select the sample, the researcher allocated each school a unique number. In order to give a fair chance of participation in the study, a computerised electronic system was used to generate random numbers between 1 and 903, which was used to identify participating schools. Once the participating schools had been selected, class teachers of Grade 6 of 2022, PTA representatives and chairpersons of Boards of Management were included in the study. Primary data was gathered from the field by use of a semi-structured questionnaire and an interview schedule. The questionnaire comprised of closed and open-ended questions. It was administered among teachers and Chairpersons of Board of Management and PTA representatives. This instrument was preferred because the population is relatively large.

Qualitative data was collected by use of interview schedules, containing open ended questions informed by all variables under this study. Interview schedules were administered among selected key informants, including 41 curriculum support officers and 9 sub county education officers. Interview schedule was preferred as a tool to collect data among key informant respondents because they provide an opportunity for the researcher to seek clarification, explore beliefs, ideas, and opinion of the respondents (Kombo & Tromp, 2006). After the validation process was completed, the conclusive information was transferred to the Statistical Package for Social Science (SPSS) for the purpose of statistical examination. The examination of numerical information took place using SPSS Version 20.0. This version offers increased adaptability, enabling the transformation of data into various arrangements. The initial dataset was retained prior to any data manipulation.

Descriptive, regression and inferential analysis were used. For the descriptive statistics, Mean, SD, minimum, and maximum were used to analyse the continuous variables while non-continuous variables were analysed using frequency distribution. Inferential analysis was computed using Pearson Correlation coefficient and Analysis and multiple regression analysis. The researcher generated codes from qualitative data which was analysed thematically. Data was tape recorded, and a verbatim developed through transcription. Thereafter, emerging themes were coded, interpreted and analysed for meaning beyond face value. Inferential analysis was used to show how the survey's factors relate to each other. Inferential analysis like the Pearson

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correlation coefficient and linear regression analysis was used in this research. Analysis of Variance (ANOVA) was used to test the relationship between variables.

The statistical regression model for undertaking analysis was:

$$Y = \beta_0 + \beta X + \epsilon$$

Whereby Y = learners' outcome in Makueni County, X= availability of learning resources,

β_0 = Constant, β = Coefficients of Determination

ϵ = Error Term.

This research upheld legal and moral considerations as a guideline for behavior that distinguishes between acceptable and unacceptable actions (Resnik, 2011). Before commencing the research, the researcher secured written authorization from Kenyatta University and the National Commission of Science, Technology, and Innovation (NACOSTI). Additionally, the researcher sought consent from the participants, providing them with an explanation of the study's objectives. Furthermore, the researcher shared the research results with relevant stakeholders interested in the study's outcomes once the research concluded. The researcher adhered to three core principles: maintaining confidentiality, ensuring anonymity, and using the collected data solely for academic purposes.

Findings and Discussion

A total of 351 questionnaires were administered to the respondents made up of 117 Grade 6 teachers, 117 PTA representatives and 117 Chairpersons of Board of Management. In addition, the study sought to interview 41 Curriculum Support Officers and 9 Sub County Directors of Education. Response rate results revealed varying levels of participation among different groups of respondents in the study, which include Grade 6 teachers, PTA representatives, Chairpersons of Board of Management, Curriculum Support Officers, and Sub County Directors of Education. Out of the 351 questionnaires administered to grade 6 teachers, chairpersons of board of management and PTA representatives 323 questionnaires were dully filled and returned, yielding a response rate of 92 percent. In the case of interviews administered to curriculum support officers, the response rate was 90.2%, with 37 out of 41 interviews conducted. For Sub County Directors of Education, the response rate was 100%, with all 9 interviews successfully administered.

Demographic results showed that majority (61.3%) of the respondents were male, while 38.7% were female. Regarding the age distribution, slightly more than half (51.01%), constituting majority of the respondents, fell within the 26 to 35 years age bracket, reflecting a significant youth demographic. In terms of academic qualifications, majority (63.5%) of the respondents had certificate as highest educational attainment, 22% had diploma, and 12.7% were bachelor's degree holders. Regarding the class taught, 14.2% of respondents were involved in teaching both class 5 and 6, while a significant majority (85.8%) were engaged in teaching specifically class 6. This distribution reflects the distribution of respondents across different teaching roles and suggests that the study encompassed teachers with different teaching assignments within the curriculum.

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Availability of learning resources

The study sought to assess the effect of availability of learning resources on learners' outcomes in Makeni County. Eleven statements were presented to the respondents to collect their level of satisfaction with the availability of learning resources in their respective schools. Table 1 presents the descriptive statistics results generated for availability of learning resources.

Table 1: Availability of Learning Resources

Statement	Very Satisfied	Satisfied	Moderately Satisfied	Dissatisfied	Very Dissatisfied	Mean	Std. Dev.
Number of textbooks against the number of learners	5.00%	5.60%	27.60%	36.50%	25.40%	3.72	1.06
number of work books	9.60%	9.30%	12.40%	46.10%	22.60%	3.63	1.20
Programmed materials	6.20%	5.30%	10.20%	43.00%	35.30%	3.96	1.11
Number of computers against the number of learners	5.90%	9.00%	13.90%	34.70%	36.50%	3.87	1.17
Number of Programs	5.60%	7.40%	12.10%	48.60%	26.30%	3.83	1.08
Flat pictures	11.80%	9.60%	4.00%	57.30%	17.30%	3.59	1.22
Number of Maps	5.00%	5.30%	5.90%	56.30%	27.60%	3.96	1.00
Number of models	10.20%	9.30%	8.00%	44.30%	28.20%	3.71	1.25
Availability of real objects	2.80%	5.30%	3.10%	73.10%	15.80%	3.94	0.81
Posters availability	7.70%	5.00%	5.60%	28.20%	53.60%	4.15	1.21
Number of televisions	3.10%	5.90%	2.80%	84.50%	3.70%	3.80	0.73
Overall Mean						3.83	

Based on the results on programmed materials, the majority (78.30%) of the respondents were dissatisfied. The mean score was relatively high at 3.96 with a standard deviation of 1.11, indicating a strong negative reception for these materials, though with some differing opinions. When assessing the ratio of computers to learners, most (71.20%) of the respondents expressed dissatisfaction. The mean response was 3.87 with a standard deviation of 1.17, reflecting non-availability but also highlighting the need for more uniform access across learners. In the case of the number of programs, three-quarters (75%) of respondents reported dissatisfaction, with a mean of 3.83 and a standard deviation of 1.08. This suggests that the programs were generally not well-received, but there were differences in how they were valued across respondents.

The results further show that flat pictures had a lower satisfaction rate, with 74.60% of the respondents being dissatisfied, and a mean of 3.59, the lowest among the items. The high

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standard deviation of 1.22 indicates significant differences in opinions, possibly reflecting uneven distribution or varying relevance of these materials. The number of maps saw the majority (83.90%) expressing dissatisfaction, a high mean of 3.96, and a lower standard deviation of 1.00, suggesting consistent dissatisfaction and poor availability. For models, the dissatisfaction rate was 72.50%, with a mean of 3.71 and a relatively high standard deviation of 1.25, indicating varied experiences among the respondents.

The availability of real objects had an 89.90% dissatisfaction rate, the highest among the categories, with a mean of 3.94 and the lowest standard deviation of 0.81, showing both high dissatisfaction and inconsistency in responses. Moreover, posters availability had an 81.80% dissatisfaction rate, with a mean of 4.15, and a standard deviation of 1.21, indicating that while most of the respondents found posters unimportant, there was a significant variation in their perceived value. Finally, the statement on the number of televisions showed that 88.20% were dissatisfied, with a mean of 3.80 and a standard deviation of 0.73, reflecting widespread dissatisfaction with their availability. The mean dissatisfaction score across all categories was 3.83, indicating that generally the respondents were dissatisfied with the availability of learning resources in Makueni County. However, the varying standard deviations indicate that experiences differed among respondents, suggesting areas where resource distribution or quality could be improved. These findings are contrary to the Basic Education Curriculum Framework (BECF) formulated by The Kenya Institute of Curriculum Development (2017) which offers guidance for crafting and executing the fundamental education curriculum across pre-primary, primary, and secondary education tiers in Kenya.

During the interviews with the curriculum support officers and sub county education officers in Makueni County, the KIIs were asked to give their views regarding availability of CBC learning materials. Most of the KII acknowledged the efforts made in distributing CBC materials but pointed out challenges in ensuring adequate and timely availability in all schools. They emphasized the importance of having sufficient textbooks and other resources to support the hands-on, practical approach of CBC. Concerns were also raised about the need for more teacher training to effectively use these materials. Some officers suggested that collaborations with local communities and stakeholders could help in supplementing government efforts, ensuring that all learners have the necessary resources to fully benefit from the CBC approach. Most of the KIIs explained that;

While there has been progress in the distribution of Competency-Based Curriculum (CBC) materials in Makueni County, the situation is mixed and varies significantly across different regions and schools. Urban areas generally have better access to CBC materials compared to rural schools, where shortages are more pronounced. Moreover, there is serious disparity in access between public and private schools, with private schools often having better resources than public schools.

The responses from curriculum support officers and sub-county education officers in Makueni County as presented imply that there are serious challenges in the equitable distribution and availability of Competency-Based Curriculum (CBC) learning materials, highlighting a disparity

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that affects the effectiveness of the CBC approach in the County. The responses indicate that despite progress, the uneven access to resources between urban and rural schools, as well as public and private institutions, highlighting the need for enhanced distribution strategies, increased teacher training, and community engagement. These disparities hinder the hands-on, practical education that CBC aims to provide, potentially widening the educational gap between different regions and types of schools, and affecting the overall quality of education and competency development among learners in Makueni County. These responses are consistent with the assertions by Mynbayeva, Sadvakassova and Akshalova (2018) that, teaching aids and educational resources play a crucial role in nurturing personal characteristics, societal roles, and academic proficiencies in learners.

In addition, many curriculum support officers and Sub County Directors of Education noted that;

The quantity and quality of CBC materials present challenges in our County. There's a consensus that while basic materials are available, more specialized resources, particularly for subjects like science and for special needs education, are lacking. In our opinion, there is need for timely distribution and replenishment of materials to ensure consistent access across all schools. Regarding digital resources, we have a concern about the scarcity, especially accentuated by the pandemic's push towards digital learning. The digital divide in this region has made it difficult for all learners to benefit equally from the CBC, with those in less developed schools at a disadvantage. Despite the government's efforts, the availability of digital resources needs to be addressed more effectively.

Table 2 presents the descriptive statistics results generated for learners' outcome.

Table 2: Descriptive Statistics on Learners' Outcome

Statement	Poor	Fair	Good	Very good	Excellent	Mean	Std. Dev.
Learners are able to analyze complex problems and come up with innovative solutions.	0.00%	22.90%	32.80%	27.60%	16.70%	3.38	1.02
Learners are able to apply effective cognitive strategies for learning and problem-solving.	1.20%	14.20%	36.50%	31.90%	16.10%	3.47	0.97
Learners are able to effectively communicate verbal information.	0.30%	8.70%	44.00%	28.20%	18.90%	3.57	0.9
Learners are able to demonstrate proficient motor skills.	0.60%	11.80%	36.80%	31.60%	19.20%	3.57	0.95
Overall Mean						3.498	

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The results show that none of the respondents rated learners' ability to analyze complex problems and innovate as poor, 27.60% of respondents perceived learners as having a very good ability in analyzing complex problems and innovating, while an additional 16.70% considered it excellent. The mean response for this competency was 3.38, indicating a moderate to good level of competence, with a standard deviation of 1.02, suggesting some variability in perceptions.

Additionally, the results show that only 1.20% of the respondents rated learners' ability to apply effective cognitive strategies as poor, the majority of respondents (36.50%), rated learners' ability to apply effective cognitive strategies as good, and while 31.90% deemed it very good. The mean response for this competency was 3.47, reflecting a relatively good perception, with a standard deviation of 0.97, indicating relatively consistent views among the respondents. Moreover, most (44.00%) of the respondents rated learners' ability to effectively communicate verbal information as Good, and 28.20% rated it as Very Good. The mean response for this competency was 3.57, signifying a good level of proficiency, with a standard deviation of 0.9, suggesting relatively consistent perceptions among the respondents.

Finally, no respondents rated learners' ability to demonstrate proficient motor skills as Poor. Approximately a third (31.60%) of the respondents considered learners to have Very Good motor skills, while 19.20% rated learners' ability to demonstrate proficient motor skills as Excellent. The mean response for this competency was 3.57, indicating a good level of motor skills, with a standard deviation of 0.95, suggesting some variability in perceptions. These findings suggest that, learners in Makueni County possess commendable competencies across the analyzed areas. While there is some variability in perceptions, particularly in the ability to analyze complex problems and innovate, the overall view is positive. These results provide valuable insights into how learners' outcomes are perceived in the county and can inform educational policies and practices to further enhance these competencies.

Correlation Analysis Results

This study conducted correlation analysis to assess the nature and the strength of the association between availability of learning resource and learners' outcomes in Makueni County and the results were as shown in Table 3.

Table 3: Correlation Matrix

		Learners' Outcome	Learning Resources
Learners' Outcome	Pearson Correlation	1.000	
	Sig. (2-tailed)		
Learning Resources	Pearson Correlation	.764**	1.000
	Sig. (2-tailed)	0.000	

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

The correlation analysis results in Table 3 show a strong positive and significant association between availability of learning resources and learners' outcome in Makueni County ($r = 0.764$, $p < 0.05$). This implies that the more adequately equipped schools are with necessary learning materials, the better the learners' performance outcome. This points to the need for policymakers and educational authorities to prioritize resource allocation in the educational sector, especially

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in the context of implementing a competence-based curriculum. The findings are consistent with the findings of a study by Bukoye (2018) that showed significantly strong and positive correlation between academic performance and learning materials. Bukoye (2018) indicated that schools equipped with ample resources tended to achieve better academic results compared to schools with fewer materials. Additionally, the results agree with the observations by Okongo, Ngao, Rop, and Nyongesa (2015) that schools under the management of individuals demonstrated robust performance as a result of having ample and suitable teaching and learning resources.

Regression Analysis

Linear regression analysis was conducted to assess the relationship between availability of learning resources and learners' outcomes. Table 4 shows model summary between availability of learning resources and learners' outcomes.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764a	0.584	0.582	0.50574

a Predictors: (Constant), Learning Resources

Source: Field Data, 2023

The results in Table 4 show that the coefficient of determination (R-squared) was 0.584, implying that 58.4% of the variation in learners' outcomes in Makueni County is explained by the availability of learning resources. This implies a strong relationship where changes in learning resources significantly affect learners' outcomes. Additionally, the results revealed an adjusted R Squared of 0.582. This implies that after adjusting for any predictors in the model, 58.2% of the variation in learners' outcomes in the County is accounted for by the availability of learning resources. This value is very close to the R Squared, indicating a good fit of the model to the data with minimal overfitting. Table 5 shows the NOVA results.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115.041	1	115.041	449.771	.000 ^b
	Residual	82.104	321	0.256		
	Total	197.145	322			

a. Dependent Variable: Learners' Outcomes

b. Predictors: (Constant), Learning Resources

Source: Field Data, 2023

The ANOVA results in Table 5, show that the model was statistically significant in explaining the effect of availability of learning resources on learners' outcomes. This is indicated by the F-value of 449.771 and a p-value of 0.000, which is less than critical p-value of 0.05 for statistical significance. This implies that the relationship observed in the model is not due to random

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chance but is a significant finding. The ANOVA results strongly suggest that the availability of learning resources has a significant effect on learners' outcomes in Makueni County. Table 6 shows regression coefficient results.

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Table 6: Regression Coefficient Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	0.899	0.106		8.451	0.000
	Learning Resources	0.669	0.032	0.764	21.208	0.000

a. Dependent Variable: Learners' Outcomes

Source: Field Data, 2023

$$Y = 0.899 + 0.669X$$

Where

Y= Learners' Outcomes

X= Availability of Learning Resources

The regression coefficient results in Table 6 reveals a positive and statistically significant relationship between the availability of learning resources and learners' outcomes ($\beta=0.669$, $p=0.000<0.05$). This implies that for every unit increase in learning resources availed, there is an expected corresponding improvement of 0.669 units in learners' outcomes. This significant effect is further supported by t-statistics value of 21.208 and a p-value of 0.000, strongly indicating that better access to learning resources is a key factor in improving educational outcomes among learners in Makueni County. These findings point to the critical role played by adequate learning resources in educational settings, aligning with educational theories that emphasize the importance of resource availability in enhancing the learning experience and outcomes. This agrees with the findings of a study by Bukoye (2018) which demonstrated a significantly strong and positive correlation between academic performance and learning materials. Bukoye (2018) also found that schools equipped with ample resources tended to achieve better academic results compared to schools with fewer materials. Moreover, these findings correspond with the results of a study by Okongo, Ngao, Rop, and Nyongesa (2015) which revealed that schools under the management of individuals demonstrated robust performance as a result of having ample and suitable teaching and learning resources.

Conclusion

Based on the findings, this study concludes that the availability of learning resources is a critical determinant of learners' outcomes in Makueni County. Access to quality learning materials and facilities forms the backbone of an effective educational system. This study's findings confirm that when schools are equipped with adequate resources, learners' performance and learning experiences are significantly enhanced. Therefore, investment in learning resources should be a top priority for educational authorities to ensure that learners in Makueni County have access to the tools and materials they need to succeed. The study also concludes that the evolving educational landscape, increasingly driven by technology and innovation, demands that learners are provided with resources that are not only sufficient in quantity but are also contemporary and relevant. This necessitates a strategic approach by educational authorities, where investments are

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not just focused on fulfilling basic needs but are also channelled towards integrating advanced educational technologies and resources. Thus, a comprehensive resource allocation plan that considers both traditional and modern educational tools is crucial for the holistic development of learners in Makueni County.

The imperative for equitable distribution of educational resources becomes a cornerstone of policy implications. To bridge disparities in educational outcomes, policy directives must focus on standardizing resource allocation, particularly targeting rural and underprivileged schools. This policy should encompass a systematic approach to balance resource distribution, ensuring all schools, regardless of their geographical or economic status, have equal access to essential learning materials. Policy implications extend to the development of educational infrastructure. It is paramount to frame policies that not only address the physical structures of schools but also include provisions for modern educational facilities like computer labs and libraries. The policy should advocate for multi-faceted funding avenues, combining government initiatives with public-private partnerships, to facilitate comprehensive infrastructure development.

Recommendations

Management in the education sector should prioritize the allocation of learning resources in Makueni County schools, focusing on areas with the highest dissatisfaction rates. In addition, emphasis should be on improving the availability of real objects, televisions, programmed materials, maps, and computers. This should involve budget reallocations, seeking additional funding, or forming partnerships with private and public entities to increase resource availability. The study highlights the need for policies that support continuous professional development for teachers. These policies should promote state-sponsored training programs, offer incentives for further education, and encourage partnerships with educational institutions for ongoing teacher development. Such policies would ensure teachers are well-equipped with contemporary teaching skills and knowledge, enhancing the overall quality of education. Moreover, updating the curriculum and assessment methods in line with current educational standards and practices is a critical policy implication. The focus should be on embedding competency-based learning within the curriculum and designing assessments that effectively gauge a broad spectrum of learner skills and knowledge. Policies should advocate for the modernization of teaching and assessment methods, aligning them with the evolving educational landscape.

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References

- Amunga, J., Were, D., & Ashioya, I. (2020). The teacher-parent nexus in the competency-based curriculum success equation in Kenya.
- Bajis, D., Char, B., Penm, J., & Moles, R. (2016). Competency-based pharmacy education in the Eastern Mediterranean Region—A scoping review. *Currents in Pharmacy Teaching and Learning*, 8(3), 401-428.
- Blazar, D., & Kraft, M. A. (2017). Teacher and teaching effects on students' attitudes and behaviours. *Educational evaluation and policy analysis*, 39(1), 146-170.
- Bukoye, R. (2018). Utilization of instruction materials as tools for effective academic performance of students: Implications for counselling. *Proceedings*, 2, 1395. doi:10.3390/proceedings2211395.
- Castanho, R. A., Vulevic, A., Fernández, J. C., Fernández-Pozo, L., Gómez, J. M. N., & Loures, L. C. (2017). Accessibility and connectivity—Movement between cities, as a critical factor to achieve success on cross-border cooperation (CBC) projects. A European analysis. *Sustainable Cities and Society*, 32, 181-190.
- Cheptoo, Ruth (2019). “The ‘Africanized’ Competency Based Curriculum: The Twenty-First Century Strides.” *Shanlax International Journal of Education*, vol. 7, no. 4, 2019, pp. 46-51.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.
- Hall, G. E., Hoard M. S., & Rutherford, A. A. (2006). *Measuring Implementation in Schools: Innovation Configurations*. Austin, TX: SEDL. Available From [Http://Www.Sedl.Org/Pubs/Catalog/Items/Cbam19.Html](http://www.sedl.org/pubs/catalog/items/cbam19.html)
- Hall, G. E., Loucks, S. g., Rutherford,,W. I.,, & Newlove, B. W. (1975) Levels of Use of the Innovation: A framework for analysing innovation adoption. *Journal of Teacher Education*, 26(1), 52-56.
- KNUT, (2019). *Influence of Teachers Preparedness on Implementation of Competency Based Curriculum in Primary Schools in Kenya*
- Kothari, C. R. (2011). *Research methodology*. new Age.
- Misbah, Z., Gulikers, J., Dharma, S., & Mulder, M. (2020). Evaluating competence-based vocational education in Indonesia. *Journal of Vocational Education & Training*, 72(4), 488-515.
- Momanyi, J. M., & Rop, P. K. (2019). Teacher preparedness for the implementation of competency-based curriculum in Kenya: A survey of early grade primary school teachers' in Bomet East Sub-County. *The Cradle of Knowledge: African Journal of Educational and Social Science Research*, 7(1), 10-15.
- Momanyi, J. M., & Rop, P. K. (2020). Teacher preparedness for the implementation of competency-based curriculum in Kenya: A survey of early grade primary school teachers' in Bomet East Sub-County. *The Cradle of Knowledge: African Journal of Educational and Social Science Research*, 7(1), 10-15.
- Mynbayeva, A., Sadvakassova, Z. and Akshalova, B. (2018). Pedagogy of the Twenty-First Century: Innovative Teaching Methods. In O. Bernad Cavero and N. Llevot-Calvet

Citation: Mulatya, F; Muna, W & Kipchumba, H. (2024). Exploring the Effect of Learning Resource Availability on Student Outcomes in Makeni County: An in-Depth Analysis. *Journal of Popular Education in Africa*. 8(8), 5 – 24.

- (Eds.), *New Pedagogical Challenges in the 21st Century*, 3–20.
<https://doi.org/10.5772/intechopen.72341>
- Ondimu, S. M. (2018). *Teachers' preparedness for implementation of the competency-based curriculum in private pre-schools in Dagoretti North Sub-County, Nairobi City County* (Doctoral dissertation, university of nairobi).
- Onyango, D. O. (2020). Decentralization of basic education in Tanzania. *Tridax Africa Company Limited*.
- Smith E (1996). A Study of the Penetration of Competency-Based Training in Australia. *Research in Post-Compulsory Education* 1(2):169-185.
- Suryawati, E., & Osman, K. (2017). Contextual learning: Innovative approach towards the development of students' scientific attitude and natural science performance. *Eurasia Journal of mathematics, science and technology education*, 14(1), 61-76.
- Tromp, R. E., & Datzberger, S. (2019). Global education policies versus local realities. Insights from Uganda and Mexico. *Compare: a journal of comparative and international education*.
- UNESCO. (2015). Training Tools For Curriculum Development: A Resource Pack (Module 6). Retrieved From http://www.ibe.unesco.org/fileadmin/user_upload/Cops/Pages_Documents/Resource_Packs/TTCD/Sitemap/Module_6/Module_6.html. [Links]
- URUNANA. R. W. (2018). Implementing Competency-Based Curriculum. Success and Challenges. Kigali, Rwanda. Issue 006 July 2018.
- Yanow, D. (2017). Qualitative-interpretive methods in policy research. In *Handbook of public policy analysis* (pp. 431-442). Routledge.