

ENHANCING EDUCATIONAL SUCCESS: INVESTIGATING THE IMPACT OF TEACHER CAPACITY BUILDING ON LEARNER OUTCOMES IN MAKUENI COUNTY

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Accepted: July 22, 2024

ABSTRACT

In a competitive world with varying degrees of complexity in social, economic and cultural needs of our society, the need to deliver a competitive, effective and relevant education system remains a pressing obligation for both policymakers and bureaucrats. Existing research on the effects of implementation of the National Curriculum Policy of 2018 on learning outcomes remain inconclusive. In view of this, the study was carried out with the aim of determining the effect of teacher capacity building on learners' outcome in Makueni County. The study was anchored on Street-Level Bureaucracy 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 study revealed that teacher capacity building significantly influences learners' outcomes in Makueni County, with 40.9% of the variation in outcomes attributable to this factor. The findings also highlighted widespread dissatisfaction among teachers with current capacity-building initiatives, including skill development, seminars, mentorship, and in-service training, pointing to areas for urgent improvement. Furthermore, the study found a positive and statistically significant relationship between teacher capacity building efforts and learner outcomes ($\beta=0.628$, $p<0.001$). The study therefore recommends that management should revamp professional development programs which should include focus on practical, hands-on training, mentorship programs, and exposure to innovative teaching methodologies.

Keywords: Teacher Capacity Building, Learner Outcomes, Professional Development, Educational Success, Makueni County

CITATION: Mulatya, F., Muna, W., & Kipchumba, H. (2024). Enhancing educational success: investigating the impact of teacher capacity building on learner outcomes in Makueni County. *Reviewed Journal of Social Science & Humanities*, 5 (1), 358 – 372.

INTRODUCTION

The concept of "learning outcomes" is often understood as "educational attainment" or "academic achievement," signifying the overall effectiveness and results garnered through the educational journey within academic 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. 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.

Lai and McNaughton (2018) identified the importance of inclusive curriculum design in enhancing student outcomes. They noted the need for differentiated instruction and supportive learning environments. Overall, these studies underscore the influence of curriculum on learning outcomes and emphasize the significance of thoughtful curriculum planning and implementation in optimizing student learning. International organizations, such as UNESCO (United Nations Educational, Scientific and Cultural Organization) and OECD (Organization for Economic Co-operation 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 comparability and transparency in educational achievements across borders. This allows for better recognition of qualifications and facilitates lifelong learning and educational mobility for individuals.

Global educational curricula are in a state of continuous adaptation to align with a fast-changing social, political, economic and technological environment. This imperative to change is inevitable for all nations irrespective of their level of development. In the context of a globalising world, nations are racing to achieve their individual education goals and also compete with other nations in producing individuals who can actively and productively participate in the global economy. Indeed, the term 'curriculum,' stemming from the Latin word "currere" denoting a race akin to that of an athlete or horse (Aytac & Deniz, 2010), takes on an educational connotation referring to a structured program or set of studies to be accomplished by a learner over a specified timeframe (Savage & O'Connor, 2015). Scholars have traced the origin of the competency-based curriculum back to 1957 in the United States. This educational concept emerged as a response to the Soviet Union's launch of the first satellite, as highlighted by Hodge (2007). Moreover, according to Cheptoo (2019), its implementation was prompted by concerns over subpar student performance and inadequate quality of teacher training. This prompted a need to structure learning outcomes in a way that would encourage educators to define their teaching goals based on observable student actions.

In 1998, South Africa took the lead in Africa by implementing a competency-based curriculum in response to a shortage of professionals such as engineers, technicians, and artisans. This shift necessitated a shift in mind set among South Africans, with the aim of providing them with practical proficiencies to tackle the challenges of the modern era. Similarly, Cameroon also adopted a competency-based curriculum to graduate individuals equipped with the requisite knowledge, skills, and attitudes to address today's social and economic complexities. This educational adjustment harmonizes learning with the changing needs of society, promoting the mastery of skills, knowledge, and self-assurance in effective issue-solving – qualities highly prized in the labour market. Likewise, Tanzania embraced the competency-based curriculum to counter challenges in the training system that were adversely affecting the caliber of graduates entering the workforce. The prior educational framework lacked clear competence objectives, impeding graduates' job readiness.

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.

The implementation 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 implementation 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. 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 success in the implementation of the CBC curriculum is tied to teacher preparations and this may vary from one location to another due to access of information. 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 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 support and its effect on learner's outcome in Makueni County warranted a thorough investigation. This study sought to determine the effect of teacher capacity building on learners' outcome in Makueni County.

Research Objective

This study determined the effect of teacher capacity building on learners' outcome in Makueni County. The study was guided by the following research question;

- What is the effect of teacher capacity building on learners' outcomes in Makueni County?

LITERAURE REVIEW

Theoretical Framework

This study was anchored on Street-Level Bureaucracy. The concept of the Street-Level Bureaucracy framework was pioneered by Michael Lipsky in 1980 within his publication titled "Street Level Bureaucrats: Dilemmas of Individuals in Public Services." Lipsky's work focused on illuminating the pivotal role played by front-facing public servants those professionals who directly interact with the public while carrying out their duties. This group encompasses various professionals such as educators, police officers, and counsellors. Noteworthy contributors to the evolution of this framework also include Steven Maynard-Moody and Michael Musheno, who, in their 2003 book "Cops, Teachers, Counsellors: Stories from the Front Lines of Public Service," further enriched our understanding of this concept.

One critique of street-level bureaucracy is the lack of attention given to organizational factors. Painter (2006) argued that the concept often focuses excessively on individual discretion while neglecting the influence of organizational context. This critique highlights the need to consider factors such as resource constraints, bureaucratic rules, and organizational cultures that significantly shape the behaviour and decision-making of street-level bureaucrats. Another critique pertains to the overemphasis on individual discretion while downplaying the impact of policy mandates and organizational directives. Maynard-Moody and Musheno (2000) argued that street-level bureaucracy fails to sufficiently address the role of policy mandates and guidelines in shaping the behaviour of frontline workers. It is important to recognize that the behavior of street-level bureaucrats is not solely determined by their individual choices but is also influenced by the policies and guidelines they are expected to follow.

Scholars have also criticized street-level bureaucracy for its inadequate attention to power dynamics and the impact of social inequalities. Painter (2006) highlighted that street-level bureaucrats may exercise discretion unequally, favoring certain groups over others based on factors such as race, class, or gender. This critique called for a deeper examination of how power dynamics shape public service delivery and the potential for differential treatment. Neglecting the perspectives of service recipients is another critique of street-level bureaucracy. Maynard-Moody and Musheno (2003) argued that the concept fails to fully consider the experiences and viewpoints of those receiving public services.

Furthermore, it is argued that the concept of street-level bureaucracy may have limited generalizability. Lipsky (1980) acknowledged that the dynamics of frontline work and the challenges faced by street-level bureaucrats can vary significantly across different policy domains, countries, and administrative systems. This critique highlighted the need to contextualize the understanding of street-level bureaucracy and recognize the diversity of experiences and contexts in public service delivery. It is expected that their discretionary decision making, and their autonomy allows them to influence policies beyond the control of the policy makers and executives. In addition, the assumption is that they work in conditions of limited resources, and as such develop coping mechanisms to address public expectations. In this study, this framework was applicable to teachers as the main respondents in this research. Their significance in enacting the Competency-Based Curriculum is pivotal, considering the constraints posed by the availability of information, skills, capacities, and resources.

Empirical Review

Learners' Outcomes

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 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.

The Kenya Institute of Curriculum Development [KICD], (2017) formulated the Basic Education Curriculum Framework (BECF) that offers guidance for crafting and executing the fundamental education curriculum across pre-primary, primary, and secondary education tiers in Kenya. The BECF is rooted in the Competence-Based Curriculum (CBC) methodology, which spotlights the acquisition of practical abilities enabling students to apply knowledge in real-world contexts. According to the framework, students are expected to gain eight fundamental skills, including communication, teamwork, critical reasoning, innovative problem-solving, artistic expression, responsible citizenship, digital proficiency, independent learning, self-confidence, and understanding others' perspectives

Teacher Capacity Building on Learners' Outcomes

Hipolite (2019) investigated the challenges associated with implementing a Competence-Based Curriculum (CBC) in public high schools located in Morogoro Municipality, Tanzania. The study employed a case study structure combined with qualitative approaches, acquiring data from 36 respondents through observations, one-on-one interviews, and focused group talks. The findings revealed that educators encountered numerous obstacles that impeded the successful execution of the curriculum. These challenges encompassed overcrowded classrooms, insufficient teaching resources, and teachers' inadequate grasp of the CBC concept. As a resolution, the research suggested that the Tanzanian Ministry of Education should take measures to ensure that schools receive an abundant supply of instructional resources and deliver extensive ongoing training for all teachers.

A study was carried out by Ngeno, Sang, and Chemosit (2020) on teacher computer literacy in selected primary schools in Ainamoi Sub-County, Kericho County, Kenya. It demonstrated that the training of computer teachers that was completed in May 2015 did not appeal to all the teachers in the sector. The explanation was that headteachers and each school had two lower primary teachers who were ICT compliant. The study showed that teachers graduating from teacher training colleges in 2009 were also found to be

computer literate among all teachers hired by the Teachers Service Commission (TSC) after 2006. The study found out that the government wants to conduct workshops and in-service programs to cater for teachers who are still in the profession but are not computer literate or are not adequately computer literate.

Research conducted by Sifuna and Obonyo (2019) investigated the obstacles impeding the successful execution of CBC in Kenya. The study found that the curriculum lacked a structured plan and systematic implementation. Teacher training concerning both curriculum content and instructional methods was insufficient. Furthermore, the research highlighted a deficiency in educational resources and a dearth of engagement from parents and other pertinent parties in the process of reshaping the curriculum. To tackle these challenges, the study proposed that the Ministry of Education establish a comprehensive structure for enhancing teacher training, raise awareness among parents, and ensure the availability of adequate instructional materials and classrooms across all schools.

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 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). 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.

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. Inferential analysis was used to show how the survey's factors relate to each other. Inferential analysis like the Pearson 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, X= Teacher Capacity Building,

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). 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.

Descriptive Statistics Results

The study sought to determine the effect of teacher capacity building on learners' outcome in Makueni County. Table 1 presents the descriptive statistics results generated on teacher capacity building.

Table 1: Descriptive Statistics on Teacher Capacity Building

	Very Satisfied	Satisfied	Moderately Satisfied	Dissatisfied	Very Dissatisfied	Mean	Std. Dev.
Learning of new skills	4.60%	7.10%	16.70%	35.30%	36.20%	3.91	1.11
Attending of seminars, conferences and or workshops	6.80%	4.30%	18.30%	48.30%	22.30%	3.75	1.06
Expose to mentors and coaches	0.90%	2.20%	14.90%	35.30%	46.70%	4.25	0.85
Training on the curriculum	12.40%	11.10%	19.80%	46.40%	10.20%	3.31	1.18
In service training on planning	6.20%	3.70%	13.60%	40.20%	36.20%	3.97	1.1
Expose to education testing program	2.50%	1.90%	13.00%	49.50%	33.10%	4.09	0.87
Expose to lead teacher training and resources	6.50%	9.90%	13.90%	38.10%	31.60%	3.78	1.18
Overall Mean						3.866	

The findings, as illustrated in Table 1 shows that majority of the respondents (71.5%), expressed dissatisfaction statement on learning new skills. This is indicated by a mean response of 3.91 and a standard deviation of 1.11, indicating a general leaning towards dissatisfaction among the respondents. This suggests a potential gap in the effectiveness of skill development initiatives, which could have implications for learner outcomes, as teacher skill proficiency is directly linked to the quality of education. In the area of attending seminars, conferences, and workshops, most (70.6%) of the participants were dissatisfied with a mean response of 3.75 with a standard deviation of 1.06, indicating a moderate level of dissatisfaction. This reflects on the quality or relevance of such professional development activities, pointing towards a need for more targeted and impactful training sessions.

The exposure to mentors and coaches was met with significant dissatisfaction, with majority (82%) of the respondents indicating that they were not satisfied. A mean of 4.25 and a standard deviation of 0.85 demonstrates a high level of dissatisfaction among the respondents. This implies that current mentoring and coaching systems in Makueni County are not effectively meeting teachers' needs or contributing positively to their professional growth. Regarding training on the curriculum, slightly more than half (56.6%) of the respondents were dissatisfied, as indicated by a mean of 3.31 and a standard deviation of 1.18. This suggests

that while there was some level of dissatisfaction, it is comparatively lower in this area, which might point to a relatively more effective approach in curriculum training.

Furthermore, the results show that in-service training on planning had 76.4% of the respondents not satisfied, with a mean score of 3.97 and a standard deviation of 1.10. This indicates a need for enhancement in planning-related training to better cater to teachers' needs. The exposure to education testing programs had majority (82.6%) of the respondents expressing dissatisfaction, reflected in a mean of 4.09 and a standard deviation of 0.87. This high level of dissatisfaction signify shortcomings in how testing programs are integrated into teacher training. Finally, exposure to lead teacher training and resources saw most (69.7%) of the respondents expressing dissatisfaction. The mean response was 3.78 with a standard deviation of 1.18, suggesting a moderate level of dissatisfaction with this component of teacher capacity building.

In general, the average mean response for all the statements on capacity building was 3.866, indicating a general trend of dissatisfaction among grade 6 teachers, PTA representatives and chairpersons of board of managements in Makueni County regarding various capacity-building initiatives. This implies that the current approaches to teacher capacity building in the County might are not fully effective in enhancing teachers' skills and competencies, which are likely to subsequently impact learner outcomes. The findings suggest a need for a reassessment and enhancement of teacher capacity-building programs to better align them with both teacher needs and learner outcomes. These findings are in agreement with the study by Chaudhary (2015) which argued that the execution of the curriculum is influenced by a range of elements, including educators, learners, ideological factors, and cultural education. The study also unveiled that the government supplied tangible resources such as sports facilities, workshops, libraries, classrooms, laboratories, and recreational areas.

Thematic Analysis

During the interviews with the curriculum support officers and sub county education officers in Makueni County, the KIIs were asked to give their opinions regarding teacher capacity building in Makueni County. They were asked, 'In your own opinion, do you think teacher capacity building has been effectively undertaken in Makueni County?' The consensus on teacher capacity building was that while there have been significant efforts, there is still room for improvement. Most of the Key Informant Interviews (KIIs) acknowledged that there have been initiatives aimed at enhancing teacher skills, particularly in adapting to the Competency-Based Curriculum (CBC). However, they pointed out challenges such as insufficient resources, the need for more regular and comprehensive training programs, and the adaptation of training to local contexts and needs.

Most of the KIIs explained that;

My observation is that while there have been concerted efforts towards teacher capacity building, the initiatives often appear sporadic and not as well-coordinated as one would hope. There's a clear need for continuous and structured training programs that are practical and hands-on. This gap between theory and practical application in classrooms has been a significant concern. I believe that more interactive and classroom-based training methods are essential for the real improvement of teaching skills.

In addition, some KII explained that;

I've noticed progress in certain areas such as digital literacy and competency-based teaching. However, it's apparent that more subject-specific training is required. Although new methodologies, particularly related to the CBC, have been introduced, ongoing support and refresher courses are essential to maintain and enhance these standards. This approach would ensure that all teachers, regardless of their current skill level, have the opportunity to improve and stay updated with educational trends.

These responses imply that there is an important area for development in teacher training programs, emphasizing the need to balance the focus on technical skills with soft skills such as communication and empathy. The responses imply that despite some success in capacity building, there is a significant need for enhanced support for teachers, particularly in adapting to new curriculums and teaching methodologies. This is in agreement with a study by Ashiono (2018) which revealed that a mere 4% of teachers utilized ICT as a regular tool for teaching numeracy concepts. 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	

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	Teacher Capacity Building
Learners' Outcome	Pearson Correlation	1.000	
	Sig. (2-tailed)		
Teacher Capacity Building	Pearson Correlation	.639**	1.000
	Sig. (2-tailed)	0.000	

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

The correlation analysis results as depicted by in Table 3 shows that there was a strong positive and significant association between teacher capacity building and learners' outcome ($r = 0.639$, $p < 0.05$). This implies that there is a direct link between teacher capacity building and learners' outcome, suggesting that when teachers are better equipped with the skills and knowledge required for competence-based curriculum, learners benefit significantly. This concurs with assertions by Desimone and Garet's (2015) that, effective teacher PD is critical to improving learner learning outcomes and closing achievement gaps. They outlined five essential aspects of successful teacher professional development: emphasis on subject matter, interactive educational experiences, logical connection, time allocation, and group involvement. The findings further are in support of the conclusion by Chaudhary (2015) that, the execution of the curriculum is influenced by a range of elements, including educators, learners, ideological factors, and cultural education. The study also unveiled that the government supplied tangible resources such as sports facilities, workshops, libraries, classrooms, laboratories, and recreational areas.

Regression Analysis

Linear regression analysis was conducted to assess the relationship between teacher capacity building and learners' outcomes. Table 4 shows model summary between teacher capacity building resources and learners' outcomes.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.639a	0.409	0.407	0.60268

a Predictors: (Constant), Teacher Capacity Building

Source: Field Data, 2023

The results in Table 4 revealed a coefficient of determination (R-squared) of 0.409 for the relationship between teacher capacity building and learners' outcomes in Makueni County. This implies that 40.9% of the variance in learners' outcomes is accounted for by teacher capacity building, indicating a strong relationship between the level of teacher capacity building and the outcomes of learners. The adjusted R-square value was 0.407 suggesting that after accounting for any predictors in the model, 40.7% of the change in learners' outcomes in the county is explained by teacher capacity building. Table 5 shows the ANOVA results.

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	80.55	1	80.55	221.763	.000 ^b
	Residual	116.595	321	0.363		
	Total	197.145	322			

a. Dependent Variable: Learners' Outcomes

b. Predictors: (Constant), Teacher Capacity Building

Source: Field Data, 2023

Based on the ANOVA results presented in Table 5, it is evident that the model used was significant in explaining the influence of teacher capacity building on learners' outcomes in Makueni County. The significance of the model in explaining this relationship is indicated by the F-value of 221.763 and a p-value of 0.000, which is less than the critical p-value of 0.05. These results indicate the importance of teacher capacity building as a key factor in positively influencing educational outcomes in the county. Table 6 shows regression coefficient results.

Table 6: Regression Coefficient Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.911	0.149		6.118	0.001
Teacher Capacity Building	0.628	0.042	0.639	14.892	0.000

a. Dependent Variable: Learners' Outcomes

Source: Field Data, 2023

$$Y = 0.911 + 0.628X$$

Where

Y= Learners' Outcomes

X= Teacher Capacity Building

The regression coefficient results in Table 6 shows that there existed a positive and statistically significant relationship between teacher capacity building and learners' outcomes ($\beta=0.628$, $p<0.001$). This implies that for every unit improvement in teacher capacity building, there is an expected corresponding improvement of 0.628 units in learners' outcomes in the county. This significant effect is further supported by a t-statistics value of 14.892 and a p-value of less than 0.001, indicating that teacher capacity building plays an important role in enhancing educational outcomes among learners in Makueni County. These findings demonstrate the importance of investing in and developing teacher capacity to positively impact learners' educational experiences and achievements, reflecting the vital role of teachers in facilitating and improving the quality of education and learner outcomes. These findings concur with the observations of a study by Komba and Mwandangi (2015) which revealed that a significant proportion of educators lacked sufficient familiarity with the curriculum. The research also disclosed that most of the evaluated lesson plans did not exhibit the characteristics of a competent-based lesson plan. Additionally, the study pointed out that teachers' engagement of learners in classroom activities was generally inadequate, and fewer than half of the observed teachers conducted formative assessments.

CONCLUSION

The study concludes that teacher capacity building is significant for improving learners' outcomes. Teachers equipped with necessary skills and knowledge can effectively deliver the CBC, thereby enhancing learner learning. This underlines the importance of ongoing professional development and training for teachers. Initiatives aimed at enhancing teachers' abilities and teaching methods are crucial in ensuring they are well-prepared to meet the demands of the competency-based curriculum and contribute positively to the learners' academic achievements. The study also conclude that teacher capacity building helps in fostering a supportive and collaborative teaching environment. Encouraging mentorship programs, peer reviews, and collaborative planning within schools leads to a more cohesive and effective teaching community. By facilitating platforms for teachers to share best practices, experiences, and challenges, educational institutions helps create a culture

of continuous learning and improvement. Additionally, recognizing and addressing the emotional and mental well-being of teachers is important.

RECOMMENDATION

Given the dissatisfaction with teacher capacity building, the study recommends that management should revamp professional development programs. This should include focus on practical, hands-on training, mentorship programs, and exposure to innovative teaching methodologies. In addition, there is need to engage with educational experts and institutions for specialized training programs. Also, teachers should be encouraged to diversify their teaching methods, incorporating repetition, question-answer sessions, storytelling, dialogue, and creative approaches like songs and role-play. Regular workshops and training sessions can be organized to introduce and reinforce these methodologies. The study in addition 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.

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