



Level of Teacher’s ICT Competency in the Implementation of Competency-Based Curriculum in Public Primary Schools in Baringo County, Kenya

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Abstract: *Despite the increasing emphasis on integrating ICT in education, many teachers remain inadequately trained to utilize technology effectively in implementing the Competency-Based Curriculum (CBC). This lack of training hinders the use of essential tools in classroom instruction, impacting the quality of teaching and learning outcomes. The purpose of this study was to assess the level of teacher’s ICT competency in the implementation of competency-based curriculum in public primary schools in Baringo County. The study adopted descriptive research design using the mixed method approach. The target population included all the 748 head teachers and 6039 teachers in the 748 primary schools in Baringo County. The schools were selected through stratified and random sampling methods. A total of 306 teachers, 7 head teachers and 7 sub county directors of education were selected to participate in the study. Questionnaires, interview schedules and an observation schedule were used to collect data. The findings of the study revealed that there are significant gaps in teachers’ ICT competency in relation to the implementation of the competency-based curriculum (CBC) in primary schools in Baringo County. Most teachers reported insufficient training on ICT facilities necessary for CBC, and many lacked the proficiency to use computers effectively for teaching. Despite some positive feedback on training, the overall ability of teachers to integrate ICT into their classroom practices remains limited. The findings from this study will be significant to all the education sector stake holders on measures to be employed to enable informed decision-making on the successful curriculum and its implementation.*

Keywords: *Teacher’s ICT competency, Implementation, Competency-based curriculum, Public primary schools, Baringo County*

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1. Introduction

Globally, the role of ICT in education is increasingly recognized as essential to improving teaching and learning outcomes. In the 21st century, education systems in

developed countries such as Finland, South Korea, and Singapore have integrated ICT to transform teaching methods and foster critical thinking, creativity, and problem-solving skills in students (OECD, 2019). The successful implementation of competency-based education in these countries is largely attributable to the high level of

ICT competency among teachers. Teachers utilize digital tools to enhance interactive learning, facilitate personalized instruction, and conduct assessments using modern technological solutions (Burns, 2020). In developing countries, particularly in Africa, the integration of ICT into educational systems has been slow. Barriers such as inadequate ICT infrastructure, insufficient teacher training, and the high cost of technology have hindered efforts to fully implement ICT in classrooms (Unwin, 2019). Nonetheless, countries like South Africa, Ghana, and Nigeria have made strides in enhancing teachers' ICT skills to align with modern pedagogical practices.

In developed countries, ICT competency among teachers has been instrumental in improving education outcomes. For instance, Finland's education system, renowned for its success, emphasizes the use of digital tools in classrooms. Teachers are provided with continuous ICT training to enhance their digital literacy and adapt to emerging educational technologies (Blau & Shamir-Inbal, 2017). In Singapore, ICT is integral to teacher training, where educators are required to complete courses on e-learning platforms and digital pedagogy before assuming teaching positions (Chai et al., 2018). These countries demonstrate that with robust ICT competencies, teachers can transform classrooms into interactive, learner-centered environments conducive to competency-based learning. In Africa, there are varied levels of ICT integration in education systems. South Africa, one of the more developed economies on the continent, has invested in ICT infrastructure and teacher training programs. However, challenges such as unequal access to technology and limited funding for rural schools continue to impede progress (Isaacs, 2020). In Ghana, ICT teacher training has been integrated into teacher education programs, yet the slow pace of infrastructural development limits the effectiveness of this initiative (Asabere & Adjei-Quaye, 2019). Similarly, Nigeria has made efforts to improve ICT use in education, but a lack of comprehensive teacher training remains a significant barrier to the full implementation of technology in classrooms (Adomi & Kpangban, 2019).

In Kenya, the implementation of the competency-based curriculum has highlighted the need for teachers to acquire ICT skills that align with the demands of modern education (Sifuna, 2021). The government, through initiatives like the Digital Literacy Program (DLP), has provided laptops and tablets to schools and introduced training programs to enhance teachers' ICT skills (Ministry of Education, 2020). However, despite these efforts, many public primary schools, particularly in rural areas, continue to struggle with inadequate ICT infrastructure and insufficient teacher training. Studies show that while most teachers in urban public schools have basic ICT skills, rural school teachers often lack access to adequate digital resources and training opportunities (Mwangi & Mugendi, 2021). Further, a study

by Oloo (2020) revealed that teachers in rural schools not only lack digital resources but also face difficulties in maintaining the few devices available due to poor infrastructure and irregular electricity supply. Kariuki and Muthee (2019) further noted that the absence of continuous professional development programs significantly limits rural teachers' ability to improve their ICT skills, thus widening the digital gap between rural and urban schools. Moreover, Njuguna and Wambugu (2020) emphasized that while urban schools benefit from government ICT policies, rural schools are often left out, with insufficient financial support for technology integration, making it harder for teachers to leverage digital tools for instruction. These studies collectively underscore the disparities in ICT access and training between rural and urban schools, and the need for targeted interventions. Moreover, the emphasis on technology in CBC assessments and lesson delivery poses a significant challenge to teachers who are not adequately equipped. Consequently, the success of CBC in Kenya largely hinges on bridging the ICT competency gap among teachers. Therefore, the successful implementation of competency-based curricula globally and in Kenya depends on the ICT competency of teachers.

In Baringo County, the implementation of the competency-based curriculum (CBC) has faced significant challenges, particularly with regard to teachers' ICT competency. Many public primary schools in the county struggle with limited access to digital infrastructure, such as computers and reliable internet, which hampers the effective integration of ICT into teaching and learning processes. Furthermore, while some teachers have received basic ICT training through government programs like the Digital Literacy Program, the majority still lack the necessary skills and resources to fully implement ICT-based teaching methods. Rural schools in Baringo are particularly affected by these gaps, which have led to uneven adoption of the CBC across the county. In addition to the observations Kipruto and Cheruiyot (2020) found that rural schools in Baringo face significant challenges in implementing the Competency-Based Curriculum (CBC) due to inadequate ICT infrastructure, particularly in remote areas where internet connectivity is unreliable. Kiplagat (2019) highlighted that, without proper ICT training, many teachers struggle to integrate digital tools into their teaching, further delaying the effective adoption of the CBC in the county. Furthermore, a study by Chebet and Kirui (2021) pointed out that, despite efforts to provide ICT resources to schools in Baringo, the lack of technical support and maintenance has led to underutilization of available technology, leaving teachers ill-equipped to embrace the CBC's digital demands. As a result, improving teacher ICT competency through targeted training and investment in infrastructure is crucial for the successful rollout of CBC in Baringo County (Mwangi & Mugendi, 2021). The purpose of this study was to assess the level of

teacher's ICT competency in the implementation of Competency-Based Curriculum in public primary schools in Baringo County.

1.1 Objective of the study

The objective of this study was to assess the level of teacher's ICT competency in the implementation of Competency-Based Curriculum in public primary schools in Baringo County.

1.2 Research hypothesis

H₀: There is no statistically significant relationship between the level of teacher's ICT competency and the implementation of competency-based curriculum in public primary schools in Baringo County.

2. Literature Review

The integration of Information and Communication Technology (ICT) in education has gained momentum worldwide, with varying levels of implementation and impact across different regions. Globally, there is a strong emphasis on leveraging ICT to enhance educational outcomes, foster interactive learning environments, and prepare students for a digital future. In developed countries like Canada, ICT integration in education is well-established, with extensive use of digital tools and resources in classrooms. The Canadian government has invested significantly in technology infrastructure and teacher training programs to support the effective use of ICT. Teachers are encouraged to incorporate digital tools into their pedagogical practices, and there are numerous initiatives aimed at improving digital literacy among students (Canadian Teachers' Federation, 2020). However, despite these efforts, challenges such as digital equity and access remain pertinent, especially in remote or underserved areas.

In Australia, ICT is a fundamental component of the national curriculum, with a focus on developing students' digital skills from an early age. The Australian Curriculum, Assessment and Reporting Authority (ACARA) has outlined specific ICT capabilities that students are expected to acquire throughout their education (ACARA, 2021). Australian educators receive regular professional development to keep up with technological advancements and integrate ICT effectively into their teaching practices. Nevertheless, disparities in access to technology across different regions, particularly between urban and rural schools, present ongoing challenges. Efforts are continuously made to address these gaps and ensure that all students benefit equally from digital resources.

In the UK, the use of ICT in education has been promoted through various government initiatives and policies aimed at enhancing teaching and learning. The Department for Education has implemented programs to support the integration of technology in classrooms and provide training for teachers on effective digital pedagogy (DfE, 2022). The UK has seen significant advancements in educational technology, with many schools adopting interactive whiteboards, tablets, and online learning platforms. Despite these advancements, challenges such as the digital divide and the need for ongoing teacher training persist, affecting the equitable distribution of technological resources and the effective implementation of ICT in education.

Brazil has made strides in integrating ICT into education, particularly through initiatives like the National Program for the Inclusion of Youth and Adults (PROEJA), which aims to enhance digital skills among students (Silva, 2020). The Brazilian government has invested in providing schools with technological resources and training teachers to use digital tools effectively. However, there are significant disparities in ICT access and quality between different regions of the country. Rural and underserved areas often lack the necessary infrastructure and resources, leading to unequal opportunities for students to benefit from digital education. Addressing these disparities remains a critical challenge for the Brazilian education system.

In Egypt, the integration of ICT into education has been a priority in recent years, with the government implementing various initiatives to modernize the education system. The Ministry of Education has introduced programs to equip schools with technological resources and provide training for teachers on using ICT in their teaching practices (Hassan, 2021). Despite these efforts, challenges such as inadequate infrastructure, limited access to digital resources, and varying levels of teacher competency hinder the widespread adoption of ICT. The focus remains on improving these areas to ensure that all students have access to quality digital education.

Ghana has recognized the importance of ICT in education and has taken steps to incorporate technology into the classroom through initiatives like the Ghana National ICT for Accelerated Development (ICT4AD) policy (Ghana Education Service, 2020). The government has worked to improve ICT infrastructure and provide training for educators to enhance their digital skills. However, challenges such as inconsistent access to technology, particularly in rural areas, and the need for continuous professional development for teachers continue to impact the effective implementation of ICT in education. Addressing these challenges is crucial for achieving

equitable access to digital learning opportunities across the country.

Somalia faces significant challenges in integrating ICT into education due to ongoing instability and limited resources. The education system in Somalia has struggled with inadequate infrastructure and a lack of trained personnel to effectively implement technology in classrooms (Abdi, 2019). Despite efforts by various NGOs and international organizations to provide technological resources and training, the impact of these initiatives is often limited by broader systemic issues. Improving ICT integration in Somalia requires addressing these foundational challenges and ensuring that educational reforms are supported by stable infrastructure and comprehensive training programs.

In Rwanda, the government has actively pursued ICT integration in education as part of its Vision 2020 plan, which aims to transform the country into a knowledge-based economy (Rwanda Ministry of Education, 2021). The introduction of the Smart Rwanda Master Plan includes efforts to provide schools with digital resources and train teachers in ICT use. While there have been notable improvements, challenges such as limited access to technology in rural areas and the need for ongoing teacher support remain. Continued investment in infrastructure and professional development is essential for maximizing the benefits of ICT in Rwandan schools.

Tanzania has made efforts to incorporate ICT into its education system through initiatives like the National ICT Policy for Basic Education, which aims to enhance the use of technology in schools (Tanzania Ministry of Education, 2020). The government has worked to provide schools with technological resources and train teachers to integrate ICT effectively into their teaching practices. However, challenges such as inadequate infrastructure, limited access to digital resources, and the need for comprehensive teacher training continue to affect the implementation of ICT in Tanzanian schools. Addressing these challenges is crucial for ensuring that all students have equal opportunities to benefit from digital education.

In Kenya, the integration of Information and Communication Technology (ICT) in education has gained momentum, particularly with the introduction of the competency-based curriculum (CBC). The government has undertaken significant efforts to modernize the educational system through initiatives such as the Digital Literacy Program (DLP), which aims to provide schools with technological resources and enhance teachers' ICT skills (Mwangi & Mugendi, 2021). The DLP has seen the distribution of tablets and laptops to schools, especially in underserved areas, and has emphasized the need for teachers to incorporate digital tools into their teaching

practices. However, despite these advancements, there are substantial challenges that hinder the full implementation of ICT in Kenyan classrooms. One major challenge is the disparity in ICT infrastructure between urban and rural schools. While schools in urban areas may have relatively better access to digital resources, rural schools often face significant barriers, including inadequate infrastructure and limited access to reliable internet connectivity (Okoth, 2021). This uneven distribution of resources impacts the ability of all schools to effectively utilize ICT in teaching and learning.

Additionally, there is a notable gap in teachers' ICT competency, with many educators lacking the advanced skills required to integrate technology into their teaching practices effectively. This skills gap is exacerbated by the lack of continuous professional development opportunities for teachers, which impedes their ability to keep pace with technological advancements. The success of the CBC in Kenya largely depends on addressing these challenges. Continued investment in ICT infrastructure, especially in rural areas, is crucial for ensuring equitable access to digital resources. Moreover, providing ongoing professional development and support for teachers is essential to enhance their ICT competency and enable them to effectively implement the CBC. By addressing these issues, Kenya can better harness the potential of ICT to improve educational outcomes and prepare students for the demands of the digital age (Mwangi & Mugendi, 2021).

3. Methodology

The study adopted a descriptive research design using the mixed-method approach. The target population included all the 748 head teachers and 6,039 teachers in the 748 primary schools in Baringo County. The schools were selected through stratified and random sampling methods. A total of 306 teachers, 7 head teachers, and 7 sub-county directors of education were selected to participate in the study. Questionnaires, interview schedules, and an observation schedule were used to collect data. To ensure the validity of the research instruments, the questionnaires and interview schedules were reviewed by experts in educational research to assess their content validity and relevance to the study objectives. A pilot study was also conducted in selected schools in the neighboring county to refine the instruments and ensure they measured what they intended to. Construct validity was ensured by aligning the questions with the key variables of the study, while face validity was confirmed through feedback from the pilot study participants. Reliability of the research instruments was tested using the test-retest method, where the instruments were administered to the same group twice, with a time lapse between the administrations. A Cronbach's alpha coefficient was calculated to measure

internal consistency and an acceptable threshold of 0.7 or higher was obtained. During data collection, strict procedures were followed to maintain consistency. Quantitative data was analyzed using descriptive statistics such as frequencies and percentages, and inferential statistics using Pearson correlation. Qualitative data was presented thematically in line with the objectives of the study to ensure comprehensive reporting of the findings.

4. Results and Discussion

4.1 Teacher’s ICT competency and the implementation of competency-based curriculum

The purpose of this study was to determine the level of teacher’s ICT competency on the implementation of competency-based curriculum in primary schools. To achieve this objective, the respondents were requested to rate their level of agreement on a five-point likert scale items in the questionnaire on the level of teacher’s ICT competency on the implementation of competency-based curriculum in primary schools. Teachers’ responses were tabulated and the results are presented in Table 1

Table 1. Level of teacher’s ICT competency

Statement	SD		D		U		A		SA	
	F	%	F	%	F	%	F	%	F	%
I have been trained on the use of ICT facilities related to implementation on CBC	8	3.0	149	56.0	30	11.3	44	16.5	35	13.2
I trained adequately on how to use the projector	3	1.1	28	10.5	12	4.5	166	62.4	57	21.4
I use computers to teach CBC curriculum in class	113	42.5	99	37.2	7	2.6	20	7.5	27	10.2
I am fully equipped will ICT technological skills for effective implementation of the CBC	33	12.4	159	59.8	28	10.5	31	11.7	15	5.6
I can locate and use an application program e.g. word	8	3.0	145	54.5	33	12.4	52	19.5	28	10.5
I can search for files on a computer system	9	3.4	139	52.3	10	3.8	71	26.7	37	13.9
I can teach children using a computer	22	8.3	117	44.0	19	7.1	96	36.1	12	4.5
I can prepare a lesson using a computer	14	5.3	76	28.6	73	27.4	67	25.2	36	13.5

KEY: SD: Strongly Disagree, D: Disagree, U: Undecided, A: Agree, SA: Strongly Agree

As indicated in Table 1, the majority of the respondents, 149(56%), disagreed with the statement that teachers have been trained on the use of ICT facilities related to the implementation of CBC. 44(16.5%) agreed, 35(32.2%) strongly agreed, 30(11.3%) were undecided, while 8(3%) strongly disagreed. This therefore means that most teachers cited that they have not been adequately trained on the use

of ICT facilities for CBC implementation. A similar finding was reported by Johnson and Smith (2023), who found that in the United States, teacher preparedness for ICT use in classrooms was limited, especially in regions with lower socio-economic status, where access to training resources is less abundant. Further, the majority of the respondents, 166(62.4%), agreed with the statement that

they had been adequately trained on how to use the projector. 57(21.4%) strongly agreed, 28(10.5%) disagreed, 12(4.5%) were undecided, while 3(1.1%) strongly disagreed. This finding suggested that many teachers were adequately trained to use the projector. This study concurs with Chen et al. (2022) who found that teachers' confidence in using projectors was significantly higher after attending targeted training sessions, reinforcing the importance of professional development in technology use.

Regarding the statement that teachers use computers to teach Competency-Based Curriculum in classrooms, a majority of the respondents, 113(42.5%), strongly disagreed. An additional 99(37.2%) disagreed, 27(10.2%) strongly agreed, 20(7.5%) agreed, and 7(2.6%) were undecided. This finding suggested that the majority of teachers do not use computers to administer lessons in classrooms. In contrast, Gomes and Pereira (2022) found that teachers frequently incorporated computers into their lessons, particularly in urban areas where technology infrastructure was more developed. However, the rural-urban digital divide remained a significant barrier. Furthermore, the majority of the respondents, 159(59.8%), disagreed with the statement that teachers are fully equipped with ICT technological skills for effective implementation of the CBC. 33(12.4%) strongly disagreed, 31(11.7%) agreed, 28(10.5%) were undecided, and 15(5.6%) strongly agreed. This finding related to a study by Garcia and Mendoza (2023) which reported that many teachers lacked comprehensive ICT skills, emphasizing the need for ongoing professional development to bridge the gap between technological advancements and classroom applications.

Similarly, the majority of the respondents, 145(54.5%), disagreed with the statement that teachers can locate and use an application program, e.g., Microsoft Office. 52(19.5%) agreed, 33(12.4%) were undecided, 28(10.5%) strongly agreed, and 8(3%) strongly disagreed. This means that only a few teachers can access program locations on a computer, while most cannot. This implies that most teachers are not well-versed in computer use. This aligns with findings by Peters and Lutz (2023), which highlighted similar challenges in Germany, where teachers expressed difficulty in utilizing essential software tools in educational settings despite widespread availability. Further, a majority of the respondents, 139(52.3%), disagreed with the statement that teachers are able to search for files in the

computer system. 71(26.7%) agreed, 37(13.9%) strongly agreed, 10(3.8%) were undecided, and 9(3.4%) strongly disagreed. Moreno and Esteban (2022) conducted a study in Spain and found that teachers who received practical hands-on training in computer skills, such as file management, showed substantial improvement in their capacity to use these skills in the classroom setting. Moreover, most of the respondents, 117(44%), disagreed with the statement that teachers are able to teach children using a computer. 96(36.1%) agreed, 22(8.3%) strongly disagreed, 19(7.1%) were undecided, and 12(4.5%) strongly agreed. A study by Anderson and Hill (2023) in Australia revealed that integrating technology into lesson plans can significantly enhance student engagement, but only when teachers are confident and well-trained in the use of computers for classroom instruction.

Similarly, most of the respondents, 76(28.6%), disagreed with the statement that teachers can prepare a lesson using a computer. 67(25.2%) agreed, 73(27.4%) were undecided, 36(13.5%) strongly agreed, and 14(5.3%) strongly disagreed. This suggests that, although a number of teachers are able to search for files on a computer, most indicated they could not prepare a lesson using a computer. This implies that most teachers are not able to use a computer for administering lessons in class. Barker and James (2022), in a study conducted in Canada, also noted that while many teachers were adept at using basic computer functions, lesson preparation using technology was still a challenge for those who lacked sufficient training and resources.

4.2 Relationship between the level of teacher's ICT competency and the implementation of competency-based curriculum

The hypothesis of this research stated that:

H0₁: There is no statistically significant relationship between the level of teacher's ICT competency and the implementation of competency-based curriculum in public primary schools in Baringo County.

This hypothesis was tested using Pearson correlation Analysis and the results are presented in Table 2

Table 2: Correlation Coefficient between the level of teacher’s ICT competency and the implementation of competency-based curriculum

		Implementation of CBC
ICT competency	Pearson Correlation	.507**
	Sig. (2-tailed)	.000
	N	266

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

Table 2 shows that there was a significant positive correlation between the level of teacher’s ICT competency and the implementation of competency-based curriculum ($r = .507$; $p = .000$). At 95% confidence level the r value for teachers ICT competency was .507 showing a positive correlation implementation. This implies that an enhanced teacher’s ICT competency enhances sound implementation of competency based curriculum. Therefore, the null hypothesis which stated that there is no statistically significant relationship between the level of teacher’s ICT competency and the implementation of competency-based curriculum in primary schools in Baringo County was rejected showing that there was a significant relationship between the level of teacher’s ICT competency and the implementation of competency-based curriculum in primary schools in Baringo County.

4.3 Qualitative data

On interviewing the head teachers, one of the participants C2 said:

“Very few teachers were equipped with aspects of information technology since most of the teachers had not trained on using computers. Very few of them also had personal computers that would facilitate use in teaching and learning”

This statement suggested that many teachers were not well equipped on technological aspects and therefore it would be very difficult to transfer the same knowledge to the learners. Considering that the use of information communication technology is the main and key pillar in the implementation of competency based curriculum. Similarly, Researchers have given many reasons which include teachers’ resistance to implement the new curriculum due to incompetence of teachers, lack of training prior to introduction of the new curriculum and inadequate ICT skills (Bingimlas, 2018 & Mumtaz, 2017). According to Kinuthia (2019) majority of teachers in Kenya are computer illiterate and only a few can competently use a computer. In Kenya, there is a government policy that all schools should integrate ICT at all levels of learning to facilitate curriculum delivery in line with vision 2030.

Further, in an interview with sub-county directors of education, one of the participants said;

“Most of the teachers in primary schools did not have computer literacy skills and therefore they needed more time to understand the basic skills and also appropriate knowledge to teach children and be able to effectively implement the competency based curriculum”

This statement meant that many teachers had not trained on the basic computer packages and therefore needed more time to train on computer packages first before advancing to the next level of training on use of technology to implement the competency based curriculum. Akala (2021) states that the teacher’s role in the 21st century is under scrutiny and undergoing a fundamental change since it must be aligned with the curriculum and learners needs. However, most teachers do not have adequate technological skills for ICT integration in the classrooms. Fear, inadequate teacher confidence and competency are the major hindrance to ICT implementation in educational institutions (Silas, 2020). There is therefore a need to train teachers, make them more knowledgeable on ICT and change their attitude towards the same so that they can amicably transfer the skills to the learners.

On observation, schools where ICT resources such as computers, laptops, and projectors are readily available, teachers demonstrate a higher proficiency in utilizing these tools to enhance learning. These teachers effectively incorporate digital literacy into their lessons, using technology to facilitate interactive and engaging classroom activities. However, the report identifies significant gaps in ICT competency in schools with limited access to digital devices. Teachers in these schools often struggle with basic ICT tasks and rely heavily on traditional teaching methods. This disparity is attributed to both the availability of resources and the adequacy of ICT training provided. To bridge this gap, it is essential to ensure equitable distribution of ICT resources and provide specialized training focused on integrating technology into daily teaching practices.

5. Conclusion and Recommendations

5.1 Conclusion

The study concluded the following; Firstly, the data indicates that a substantial proportion of teachers have not received adequate training on the use of ICT facilities related to CBC implementation. The majority of respondents reported insufficient training on essential ICT tools and their application in teaching, which suggests that many teachers are not fully prepared to utilize these resources effectively in their classrooms. Although there was a relatively higher agreement that teachers were trained to use projectors, this does not necessarily translate into broader ICT competency. Teachers' responses revealed a general lack of proficiency in using computers for teaching CBC, searching files, and preparing lessons, indicating significant gaps in their technological skills. Secondly, the positive correlation found between teachers' ICT competency and the implementation of CBC ($r = .507$; $p = .000$) underscores the importance of enhancing ICT skills for effective curriculum delivery. The data supports the hypothesis that improved ICT competency among teachers is associated with better implementation of the CBC. This correlation highlights the need for comprehensive ICT training programs that can address both basic and advanced technological skills, ensuring that teachers are equipped to integrate ICT into their teaching practices effectively. Lastly, observations and interviews further corroborate the quantitative findings, revealing that schools with better access to ICT resources tend to have teachers who are more proficient in utilizing these tools. In contrast, schools with limited ICT resources face challenges that impact the quality of education and the successful implementation of CBC. There is a critical need to address these disparities by ensuring equitable distribution of ICT resources and providing targeted training for teachers.

5.2 Recommendations

Based on the findings, the following key recommendations are essential for improving the implementation of the competency-based curriculum (CBC) in primary schools in Baringo County:

1. There is a critical need to develop and implement comprehensive ICT training programs for teachers. These programs should cover both basic and advanced technological skills, including the effective use of computers, projectors, and other digital tools. Training should be ongoing and include practical, hands-on sessions to ensure that teachers can integrate ICT into their teaching

practices effectively. Professional development should also address teachers' confidence and resistance to using technology, providing support and resources to build their competencies and comfort with digital tools.

2. To support the effective implementation of CBC, it is essential to address the disparity in ICT infrastructure between urban and rural schools. The government and educational stakeholders should prioritize the equitable distribution of ICT resources, such as computers, projectors, and reliable internet access, to ensure that all schools have the necessary tools to support digital learning. Investments in infrastructure should be coupled with regular maintenance and upgrades to keep up with technological advancements.
3. Schools and educational authorities should establish systems for ongoing support and supervision of ICT integration in classrooms. This includes creating support networks for teachers to share best practices and troubleshoot issues related to technology use. Regular monitoring and evaluation should be conducted to assess the effectiveness of ICT implementation and address any challenges that arise. Feedback from teachers should be used to refine training programs and resource allocation, ensuring that support is tailored to the specific needs of schools and educators.

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