



Effects of Monitoring of Teaching and Learning on the Implementation of Competency-Based Curriculum (CBC) in Early Childhood Development (Ecd) Centres in Meru Central Sub-County

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The competency-based curriculum (CBC) is a set of courses or syllabi, which promote learning areas in which the learner is gifted and skilled. The curriculum was adopted in Kenya in January 2017, when such a change occurs in education various stakeholders and resources are needed to be considered for smooth implementation. However, in Kenya, various stakeholders have expressed concerns regarding implementation of CBC. The purpose of this study was to find out the effects of monitoring of teaching and learning on the implementation of competency-based curriculum (CBC) in early childhood development (ECD) centres In Meru Central Sub-County. Lewin's Theory of Planned Change guided the research. With adoption of descriptive research

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design, the study targeted 84 head teachers, 256 ECDE teachers and one Sub-County Curriculum support officers (CSO) in Meru Central Sub County. The study used a sample size of 14 head teachers, 51 ECDE teachers and the CSO in charge of education in the sub county. A simple random sampling was adopted to select participating schools and stratified sampling to select the head teachers, purposive sampling was used to consider ECDE teachers as the respondents for the study and the CSO. The main data collection tools to be used in this study included; questionnaire for head teachers and the ECDE teachers, interview schedule for the CSO and the observation guide that also guided the researcher on the availability of the instructional resources. The study quantitative data was analyzed using descriptive statistics modeled in percentages, mean and standard deviation while inferential statistics was correlated using Pearson product moment correlation. Qualitative data was analyzed using themes and prose. Discussion of the data was made, conclusion drawn from the findings and the study made conclusions recommendations and suggestions based on the research findings. The study found that that head teacher frequently monitors lesson attendance for effective implementation of CBC and invites quality assurance officers in school. The study concluded that Teachers held positive perceptions towards implementation of CBC as the head teachers were constantly following the curriculum implementation process right from classroom activities. The study recommended that the government should purchase more computers in schools for successful integration of technology in CBC program due to increasing population in schools. The purchasing of teaching and learning resources should also be prioritized especially for practical work and preparation of teaching aids for teachers.

Keywords: Monitoring; lewin's theory; teaching and learning.

1. INTRODUCTION

1.1 Background of the Study

A good management of the educational programs, including curriculum implementation, is an indicator of a good school management practice. The education sector in any country is viewed as the processing unit for skilled human resources ejected to the economy with the expectation that they attained certain skills, competencies, attitudes, and cultural/ social norms necessary for addressing the societal and country's accountability concerns large. However, this is not always the case due to challenges such as lack of support services, a limited number of specialized staff, lack of cohesiveness among the stakeholders, strain infrastructure, and minimum follow up, resulting in not attaining the set objectives [1]. Early childhood development education center management practice is the effective and efficient use of scarce resources in a learning center to achieve set educational objectives in a changing environment. It assists in meeting societal or governmental expectations in which schools were established [2]. Africa takes the lion's share of these challenges where most of the objectives are politically inclined, with the majority of the countries following the education systems established during the colonial times to serve the interest of the colonial masters, and

they have minimal contribution to the 21st Century concern [3]. Others have hurriedly changed the curriculum without enough physical and human resources, which leads to crisis and criticism.

The term "curriculum implementation" refers to the process of altering an existing curriculum in order to include a new curriculum. The changes in living circumstances call for a revised educational approach to society. As a consequence of this, a nation or republic has to choose a curriculum that satisfies its presumptions and expectations with respect to its educational and cultural requirements. The replacement of one educational program by another is a common occurrence at institutions of higher learning [4]. According to [5], a competency-based approach to education may aid students in problem-solving by focusing on their strengths rather than their weaknesses. This strategy helps students improve their ability to grasp information while also helping them to become more forceful in their problem-solving abilities. This is a strategy that is widely regarded as having the potential to increase the academic performance of students.

This method to teaching and learning is characterized by the linkage and integration of multiple curricular portions within a topic throughout the course of the course of instruction and learning [6]. Students learn academic

abilities that help them link their topics to real-world issues using this strategy. It is usual in pre-school programs to include thematic units, which is understandable given that children learn via interactive, integrated activities. KICD, on the other hand, has begun on a reform program regarding its curricular approach. The findings were used to influence the results of a needs assessment that was conducted in 2016. They decided to use a competency-based approach to curriculum development in order to make learning more meaningful and to better suit the demands of learners, society, and the world of work/job market in general.

Globally, implementation of competency-based curriculum (CBC) has been greatly influenced by the desire for accountability in the education system in relation to acquired skills in line with the community judgements [7]. The origin of competency-based curriculum can be traced back in the 1970s, when the United State of America first adopted it [8]. The education goals were defined in form of accuracy in measuring descriptive skills, behavior and knowledge among the learners, these measurable objectives need to be achieved by the learner at every completion stage of studies. Introduction of CBC was necessitated by the societal dissatisfaction with the curricula offered by universities and colleges. The study noted that many of these schools were providing post-education programs that were not aligned with the demands of the trainees they were training.

World Education Forum (WEF) 2015 held in Republic of Korea placed education as one of the fundamental tools for the sustainable, inclusive, fair and cohesive development of a country [9]. The forum further emphasized the importance of Competency Based curriculum as an Agenda for vision 2030 for Latin America and the Caribbean region. Curriculum change CBC was necessary because of the changing dynamics of society. Performance-Based Teacher Education (PBTE) was rebranded from Competence Based Curriculum in the 1960s. Based on the incorporation of behavioral analysis into professional activities, this shift in approach was made [10].

Competency-Based curriculum (CBC) is a key part of the 2030 goal in the African region. South Africa has seen a steady stream of educational reforms since independence. The end of apartheid in South Africa in the 1990s sparked a wave of social and economic upheaval in the

country. Democracy was introduced to South Africa with the end of apartheid. According to [11] in order to construct a new South Africa, the apartheid-era education system had to be totally restructured. Apartheid had been formally ingrained in South Africa's educational system for many decades, therefore this was a top concern. Lifelong learning and pedagogy systems have been integrated in the education sector as a goal. Thus, South Africa started on a major change in the school system. In 1997, South Africa's curriculum strategy was adopted, which resulted in an ongoing transition. Curriculum and Assessment Policy Statements (CAPS) were agreed in 2012 and implemented in 2012. They follow the 2002 establishment of the Revised National Curriculum Statement (RNCS) and the 2007 introduction of the National Curriculum Statement (NCS). Thus, course materials are always being updated.

In order to promote learning mobility, the education sector implemented an Outcomes-Based Education (OBE) system. Prior learning became more prominent in education and training as a result of this method of approaching the problem. When the CBE was launched, it represented a shift in the educational system and a means of transforming society by providing parents and learners with an opportunity to participate in their children's education. The method altered the education system by placing a high priority on learners inside the institution and by contributing to the growth of the country as a whole [11].

In Zimbabwe study by [12], on teacher factors which hindered smooth implementation of competency-based curriculum in rural pre-schools schools. The study cited teachers' lack of motivation as the major challenge which hindered the implementation of the CBC. The study recommended for a comprehensive motivation scheme for teachers in the preschool. This implies that teacher motivation is crucial for effective integration of various aspects of a curriculum.

Rwanda adopted the CBC in 2015 to address the dearth of STEM-related teaching materials in the country's schools. The need to educate a workforce that could compete on a national and international scale was a major factor. By the year 2030, it aimed to have become a middle-income, knowledge-based society, and ICT was seen as a crucial tool in achieving this goal. This is a direct result of Rwanda's educational

philosophy, which holds that all children, regardless of their socioeconomic status or where they live, deserve access to a high-quality education that allows them to reach their full potential and acquire the skills, knowledge, and attitudes that will enable them to successfully participate in and contribute to the global economy (Republic of Rwanda, 2015). In 2005, the Tanzanian government implemented the CBC initiative to reduce student difficulties in classrooms [13]. Tilya and Mafuniko's study on CBC and pedagogical approaches, which followed after five years, revealed a lack of clarity on the part of curriculum designers, textbook authors, and classroom instructors on the program's actual implementation [14].

The East African Community (EAC) member states have committed to implement a standardized, competency-based curricular structure that is in line with international developments [4]. This is due to the curriculum's role in instilling in students the important values, information, attitudes, and abilities necessary for both personal and national growth (International Bureau of Education: UNESCO, 2017).

Competency-based education's overarching goal is to inspire lifelong learning, foster individual growth, and produce morally responsible citizens (Livingstone 2015). The transition from one stage of a new curriculum to the next must be seamless. Kenya's educational system is now undergoing a dramatic change, moving away from the traditional 8-4-4 model and toward the more modern Competencies-Based Learning (CBC) system. This being in line with recommendations of reports of task force on the re-alignment of the education sector to vision 2030 and constitution 2010. CBC was implemented in Kenya in 2017 aimed at having more learner-based systems with more focus on the ability of the learners to self-learn and develop relevant skills requisite for any engagement carried out. ECDE centres are critical for the desired outcomes of the implementation of CBC, considered the entry point of the system. Meru county government has put tremendous effort in building ECDE centres and employing ECDE teachers.

According to [15], the Kenyan government began investing in preschool shortly after the country gained independence. The Department of Health and the Department of Interior were charged with the task. The two Kenyan ministries were in charge of inspecting daycares and preschools to

provide a healthy and safe environment for kids. Early Childhood Development Education (ECDE) is a vital component of a child's education, and programs in Kenya and throughout the world have been developed to ensure that children meet the analytic, physical, civic, moral, emotive, and progressive criteria necessary for their development [11]. Currently, Early Childhood Development and Education is under the care of the County Government after devolution according to the constitution of Kenya 2010. Parents, community, NGOs (Non-governmental organizations), Early childhood education and development is supported by religious and other non-profit groups. Among the many issues in the ECDE sector is coping with implementation of a Competency-Based Curriculum [16].

Study by [17] identified delays in providing the Competency-Based Curriculum Design and teaching materials, as well as a shortage of human resources, which resulted in teachers and leaders being rushed through training, as obstacles to the CBC shift. According to OECD (2016) Executive directors of Early Childhood Development Education are unable to comprehend the curriculum being used to assist other instructors on the same. Head teachers were compelled to download and print documents from the internet owing to unforeseen circumstances, but other schools were unable to do so due to a lack of resources. While the county's initiative to build preschool centers and provide resources has proven successful, there have been challenges. For example, in some schools, parental education has not been completed, resulting in parents who are confused and constantly at school with numerous questions, particularly about how learners are assessed now that there are no examinations [1].

Sub county director of education (SCDE) in Meru Central sub county while addressing a Prize giving meeting on 20th April 2021 was on record stating that some Early Childhood Development and Education instructors in Meru Central Sub-County have made the decision to revert to the previous method without announcing it (Daily Nation, 2021 April, 21). Others, on the other hand, choose to use both the thematic approach and the Competency-Based Curriculum. Some parents are perplexed by the curriculum after being sensitized, they show up at school on a regular basis to question instructors about the reason why there are no tests at the pre-school level. It is clear that stakeholders would confront difficulties throughout the implementation period

after the curriculum reform [18]. Previously, the Early Childhood Development and Education level was covered by a three-year method, but the Competence-Based Curriculum is covered in two years. UNESCO International Bureau of Education [19]. The research proposed to investigate the influence of school management practices in ECDE centers on implementation of CBC in Meru central sub-county as a result of this circumstance, which is not isolated from the aforementioned issues.

1.2 Statement of the Problem

In 2018, the Kenyan government proposed a new competency-based curriculum, with the trial phase including grades pre-K through 3. Since then, the curriculum has been met with a number of obstacles. The Ministry of Education, together with teachers' unions and parent-teacher groups, has acknowledged that there are gaps in the curriculum. UNESCO described the CBC acceptance level in Mount Kenya region as unquestionable from the teachers' feedback. However, the survey raised a lot of questions on the implementation process especially at the preschool level where the teachers were least involved in the implementation process (IBE-UNESCO, 2017). Following complaints from the Teacher's Unions, Head-Teachers Association and to an extent the general public opinion on CBC implementation, there is a clear indication that CBC implementation has encountered several challenges within the local school context where Meru central sub county is not an exception.

The existing studies on CBC have focused more on teacher preparedness and the implementation, ignoring the important factor on the management of centres. These were notably done by authors such as Mokoro, (2020), Momanyi and Rop, (2020), Waweru, (2018) and Ondimu, (2018). None of these studies have ventured on how school management practices have influenced the desired implementation of CBC moreover non has looked at public pre-schools, it is against this background that this study intended to explore how school management practices influence implementation of CBC in public ECDE centres in Meru Central Sub County.

1.3 Research Objective

The general objective of the study was to assess the effects of monitoring of teaching and learning on the implementation of competency- based

curriculum (CBC) in early childhood development (ECD) centres In Meru Central Sub-County.

1.4 Significance of the Study

The outcomes of the research may provide timely information to education officials, teachers, members of the School Board of Management (BOM), and parents in the sub-county of Meru Central on how to make a seamless implementation of the most recent curriculum. The survey's goal was to draw attention to the need of strong leadership in ensuring a seamless implementation of CBC in pre-schools, as well as to identify potential solutions to the issues that may have arose during this process.

The findings of the research may be useful to educational planners in that it will assist them in determining the resources available and their suitability. Given that resources are constantly in short supply, this will aid in the development of goals and objectives that are more realistic, as well as in the development of more accurate estimations and allocations to different needs throughout the execution of the CBC strategy. County government employees from the Ministry of education may benefit from this research, particularly in terms of implementation of the CBC, which will allow them to get a standard education and develop the abilities that are required of them.

1.5 Scope of the Study

The study limited itself to Meru Central Sub County in Meru County. Conceptually the study was limited to monitoring of teaching and learning, teacher motivation, parent involvement, and provision of resources as aspects of school management practices. The study used the questionnaire as the data collection tool, and the study population targeted 84 ECDE centers in Meru Central Sub-County. The sample size consisted of center managers and the ECDE teachers. The study was carried out in six months to give enough time to the researcher to compile complete information from the respondents.

2. LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 Lewin's theory of planned change

The curriculum implementation will be guided by Lewin's Theory of Planned Change (1947). Field theory, group dynamics, action research, and a

three-step model of change are the four main components of the theory. It underlines the significance of mapping out the completeness and complexity of the area in which change takes place, in order to better comprehend it. People and organizations inside the field are seen as part of a larger system of mutually dependent variables, which is represented by the term field.

The process begins with defrosting. At this point, change is imminent since pushing factors have finally overcome restraining ones. It's more common to find people who are driven rather than reluctant to make a change. Preparation for the intended modification is underway. Yet there's a lot of obstacles, like overcoming fear of the new or changing old habits that need to be conquered before you can get here. Effective communication regarding the reform's progress and its effects on personnel is one strategy utilized to ensure the initiative's success. The next step is training, which equips individuals with the facts and abilities they need to succeed. Workers are given a voice in shaping the transformation and making choices about it.

Employees are helped cope with the stress of the transition by being given many opportunities to voice their concerns with their peers.

During negotiations, employers often provide desirable incentives to workers in exchange for their cooperation with the desired change. Coercion by setting a deadline for workers to complete tasks is another extreme illustration of how individuals don't change because they are told to. In order to overcome opposition, it is vital to provide them with a compelling reason to cooperate. The unfreezing process comprises a sustained effort to disseminate the reform's underlying philosophy, pedagogy, goals, resources, and assessment to all relevant parties. All parties, but especially educators, should have their voices heard and concerns addressed. One way to do this is to allay the concerns of those who have a vested interest in the outcome, including the students' parents, the instructors, and the school administration. The training and retraining of instructors, as well as the acceptance of their perspectives, are even more crucial at this time.

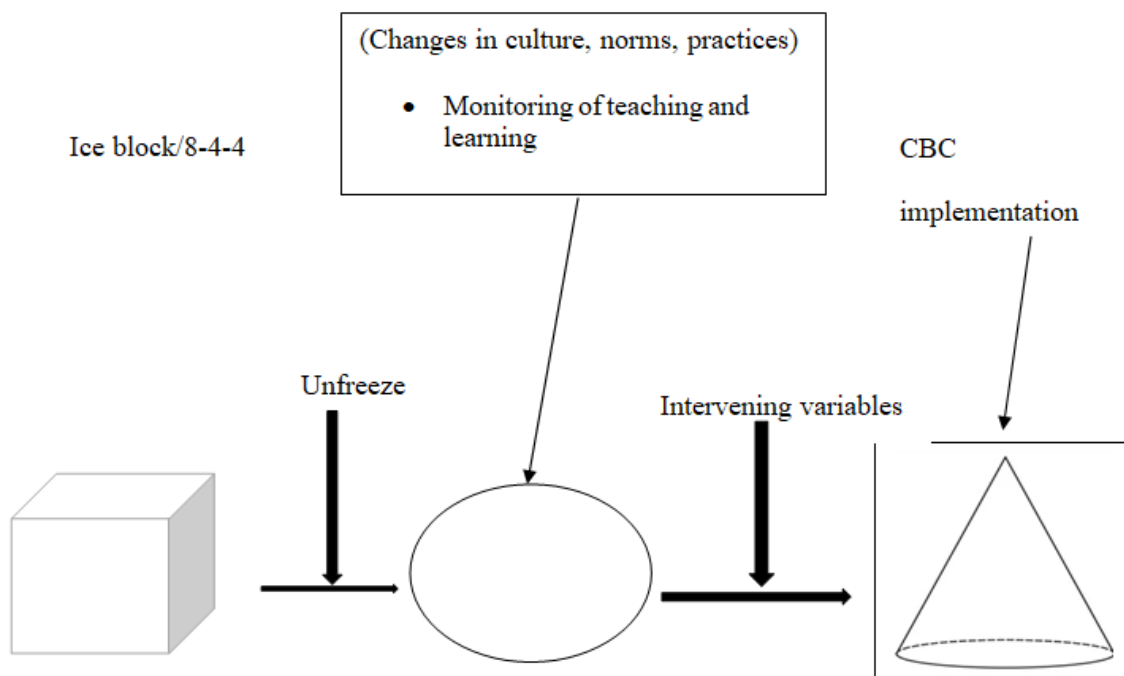


Fig. 1. Kurt Lewin 3-step model of change: adopted from Thompson (2013)

The dynamics of a group are the forces at work inside it. Change and constancy are understood as relative ideas since group life is never without change in the field, which is thought to be in a constant state of adaptation dubbed "quasi-stationary equilibrium." Group members must participate in self-organizing activities to keep the group afloat in the face of constant change, which disrupts the group's apparent patterns of behavior and procedures. There must be an understanding of how individuals, groups and organizations respond to change in order to make the most effective use of the available resources.

The second step is the changing step. This stage is when the change actually occurs. People learn the new behaviors, systems and structures. Successful implementation is characterized by changes in culture, norms and practices in curriculum implementation. This step requires cooperation of the entire stakeholder playing their roles to support the successful implementation of the new reform. The crucial stakeholders are particularly the teachers who are key implementers need support to avoid them from reverting back to their old ways of implementation.

The last step is the refreezing. This is the continuous support of the reform implemented. This stage is where the reform is reinforced. This is done through feedback and organizational rewards for demonstrating the desired behavior. Similarly, teachers' educators' positive reinforcement efforts in all aspect will enhance the teachers' continuous implementation of the reform. Many reforms have short lived or failed due to failure of continued support to the teachers, lack of resources and administrative challenges.

3. EMPIRICAL LITERATURE

3.1 Monitoring of Teaching and Learning on the implementation of Competency-Based Curriculum

According to [12], the term "monitoring" refers to the process of dealing with activities and individuals or overseeing the successful completion of a designated task with the assistance of others. In a school setting, monitoring includes all measures taken by designated school officials to provide guidance and leadership to educators, academic staff, and students in order to guarantee the effective

delivery of the curriculum. This involves coaching, role modeling, and collaborative problem solving in addition to observation, supervisee facilitation, self-assessment, assessment, comments, and knowledge and skill development. Furthermore, by expanding upon the supervised individual's identified skills and talents [20]. A curriculum supervision program should be taken by educators who desire to manage instructional and support personnel at the school building, facility, or staff level. The administration of learning activities, human resource development, and administrative duties related to departmental or unit management, and particular application to various educational settings and curricula are all addressed, as well as teaching staffing and organization principles (National Center for Education Statistics, 2018).

In this context, curriculum supervision includes observing and documenting classroom instruction and learning, aiding teachers with their professional development in both an individual and group setting, evaluating instructors, doing research, and revising curriculum materials [21]. According to [15] monitoring of teaching and learning help teachers and other staff members to behave more deliberately in their daily work environments. Its purpose is to supply curriculum implementers and supervisors with additional information as well as comprehensive insights into their respective fields of expertise. The need for monitoring teaching and learning is necessary because CBC is a new concept in the minds of supervisors, teachers, and learners. Allowing teachers and students to collaborate in this way will help teachers recognize and overcome their own difficulties as they work with curriculum leaders as supervisors. Because of this new viewpoint, school administrators will be able to better understand what is happening in the classroom. Both instructors and their supervisors benefit from supportive supervision since it is a learning environment.

Being the ministry of education's representatives in their individual centers, preschool managers are charged with the duty of overseeing and implementing the curriculum. Here is where all pre-school administrative operations begin [18]. makes it clear that all school administrators must make sure that teaching improves by helping the head teacher establish good instructional leadership. According to Palestina et al. [22] the head teacher must make sure that the professional staff is informed about the

educational goals of their school and the strategies for accomplishing them.

In Philippine, Palestina et al. [22] carried out research on curriculum implementation facilitating and hindering factors, the study focused on the perceptions of Filipino teachers and school administrators of the different facilitating and hindering factors in curriculum implementation. The study adopted descriptive research design with a target population of 324 respondents. The study revealed that there was a positive significant relationship between class scrutiny and the implementation of the curriculum in junior high school. However, the study did not focus on ECDE, thus the current study will focus on CBC implementation in ECDE centres in Meru central sub county Kenya.

[23] examined factors affecting the implementation of the competency-based curriculum in public secondary schools in Mogadishu, Somalia. The study used purely quantitative; the data was collected from 292 academic staff randomly selected from six public secondary schools. The research findings indicated that there exists a strong, significant, and positive relationship the principals' supervision as supported by a factor, ($r=.622$ with $P=0.00<0.05$) and implementation of a competency-based curriculum. This study focused on CBC implementation in secondary school level and targeted only six schools, the current study will focus on CBC implementation in 84 ECDE centres in Meru central sub county with a target population of 168 respondents.

In Kenya, inadequate and insufficient oversight often prevents education improvements from having the intended effects. This prompted the

creation of the Directorate of Quality Assurance and Standards (DQAS), which should operate once the officials who oversee education in educational institutions have improved knowledge, abilities, and attitudes [24]. This comprises instructors who also manage classroom instruction. According to Okoth et al. [25] the Directorate of Quality Assurance and Standards is in charge of raising educational standards in Kenya. This research aims to evaluate the impact of Monitoring of teaching and learning on the implementation of Competency-Based Curriculum in ECDE centers in Meru central sub county. It acts as the curriculum policeman for instructors.

3.2 Conceptual Framework

This framework was like the blueprint to the research. In this framework, management theory had been adopted in the independent variable of the study which is school management practices. The theory addresses curriculum monitoring and supervision. For the theory to be applicable there are indicators such lesson delivery observation, teacher observation and accessing evaluation methods. If these indicators are met, then the school management will enable smooth implementation of CBC.

The intangible framework demonstrated in Fig. 2 presents the conceptualizing of both the independent and dependent variables in the study. School management practice in the listed task area influences competency-based curriculum implementation which is the dependent variable for this study. Curriculum monitoring and supervision is the independent variables of the study.

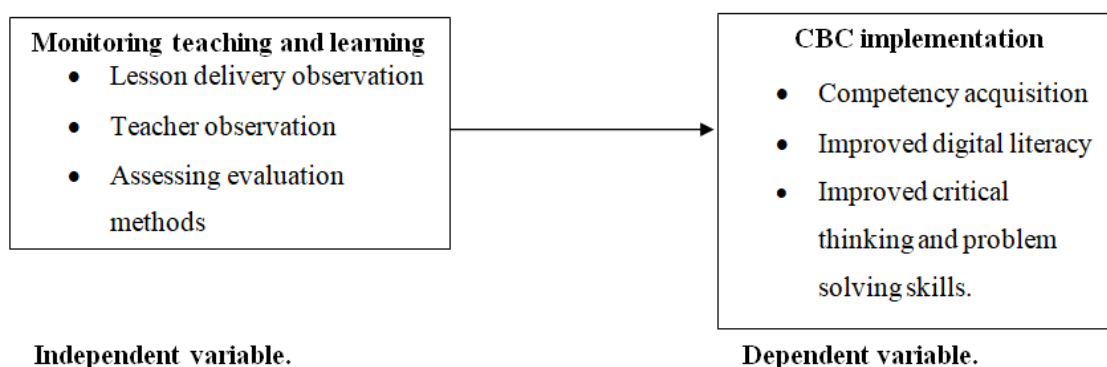


Fig. 2. Conceptual framework

4. METHODS

Kothari [26] defines a research design as the plan or framework within which the study will be conducted to get an answer to the question being asked. A descriptive survey methodology was used for this investigation. Descriptive survey research, as explained by Hermans [27] seeks to depict the past or present state of a social system like a school. This design involved both quantitative and qualitative data to produce descriptive statistics. The descriptive survey approach was used in this research because it was appropriate for collecting primary data regarding management practices in ECDE centers and because it provides the chance to make descriptive statements about a large population [16].

4.1 Target Population

Target population is described as the complete group of individuals or elements that the instigator intends to consider in the study [26]. This study considered 84 head teachers, 256 ECDE teachers and one Sub-County Curriculum support officers (CSO) in Meru central sub county. The sub county has 84 public ECDE centers, the choice of the public ECDE centers was due to the fact that they have the same characteristics and all sponsored by the government. This makes them similar in terms of resources since government finance each child equally in public ECDE centers and have no variation. The researcher purposed to select ECDE teachers because they are the medium of implementation of the Competency Based Curriculum. The Head teachers were also purposively selected for this study since they are the centers administrators and oversees the implementation of the curriculum.

4.2 Sampling Procedures and Techniques

Simple random sampling, purposive sampling technique and saturated sampling technique were utilized in this study. Simple random sampling was employed to select any ECDE center. Stratified sampling technique was used to select entire head teachers in selected ECDE centers. Purposive sampling was employed to select the ECDE teacher because they are the main target of the study and they were in a good position to avail the relevant information. The CSO was also purposively picked to give information on the CBC as the representatives of the sub-County.

4.3 Research Instruments

The research tools for this project was developed in-house. Questionnaires, interview schedules, and casual observation were all used as tools. Teachers and principals in ECDE programs were sent questionnaires to fill out. Questionnaires were both open-ended and closed ended. This was because the information that was not captured in close ended was indicated by the respondents in open ended section. A likert scale of 1 – 5 range was adopted in the questionnaire abbreviated as SA to SD where SA=Strongly D=Disagree, U=Undecided, A=Agree and SD= Strongly Disagree.

As questionnaires acquire data beyond present circumstances and are beneficial in making queries about views and attitudes, they are mostly used in descriptive research [13]. The researcher was able to compare the data gathered via observation with the data provided by the respondents through questionnaires.

5. RESULTS

5.1 Data Analysis Techniques and Procedures

5.1.1 Response rate

The respondents involved were the head teachers, ECDE teachers, and CSO. They returned the questionnaires as tabulated in Table 1.

The data in Table 1 suggests that the questionnaire return rate averaged at 90.8%, a level deemed suitable for analysis. According to [9] a response rate exceeding 70% is considered sufficient for analysis. Additionally, [28] pointed out that a robust response rate leads to more credible findings. This elevated response rate was attained through the researchers' diligent oversight of the data collection process and ongoing communication with the participants.

5.1.2 Reliability test

According to [29] pilot testing is crucial in the study process since it acts as a trial run for the methodologies and equipment that the researcher intends to use throughout the investigation. Piloting allowed the researcher to avoid making costly mistakes, which saved her money in the long run. In order to remove any ambiguity, identify improperly worded items,

instances of insufficient area to input replies, and question clustering, piloting was required. For the purpose of determining the reliability and validity of the questionnaire, pilot research was undertaken in 2 ECDE centers Imenti South Sub County randomly selected. The pilot sample size consisted of 2 head teachers and five ECDE teachers this represented 10% of the study sample size. To test the interview schedule, the researcher piloted also with the CSO in charge of Imenti south sub county. The upshot of this was the implementation of a pilot project that aided in the identification of errors in data collecting tools and the subsequent implementation of suitable changes to guarantee that correct and consistent data was gathered.

5.1.3 Demographic data

The study delved into the background details of educators, with a particular emphasis on their gender and highest educational attainment. The primary aim was to determine whether there

existed an equilibrium in gender representation within the teaching profession, and whether these educators possessed the necessary qualifications to instruct in elementary schools. The outcomes related to teachers' background information are displayed in Table 2.

Table 2 shows that majority of the teachers 66.1% were female while 33.9% were male. This implies that teaching in the ECDE is more preferred by the females than males. However, the study responses were not gender biased since each gender had more than a third representation.

The study also indicated that 60.5% of the primary schools' head teachers were male while 39.5% were female. The sub county CSO was a male aged between 36 – 41 years with a teaching experience of 11 – 15 years and indicated that he had a bachelor degree as the highest education qualification.

Table 1. Instrument return rate

Respondents' Category	Sampled size	No. collected	Return rate (%)
Head teachers	43	38	88.4
Grade one teachers	129	118	91.5
Curriculum Support Officer (CSO)	1	1	100.0
Total	173	157	90.8

Table 2. Demographic Information of the respondents

Gender		ECDE teachers		Head teachers		CSO	
		f	%	f	%	f	%
Female	Female	78	66.1	15	39.5	0	0.0
	Male	40	33.9	23	60.5	1	100
	Total	118	100	38	100	1	100
Age	Below 25 years	4	3.4	0	0		
	25 – 30 years	23	19.5	6	15.8		
	31 – 35 years	48	40.7	9	23.7		
	36 – 40 years	26	22.0	11	28.9	1	100
	Above 40 years	17	14.4	12	31.6		
	Total	118	100	38	100	1	100
Education level	P1	31	26.3	15	39.5		
	Diploma	79	66.9	12	31.6		
	Degree	7	5.9	7	18.4	1	100
	Masters	1	0.8	4	10.5		
	PhD	0	0.0	0	0.0		
	Total	118	100	38	100	1	100
Teaching experience	0 – 5 years	70	59.3	0	0.0		
	6 – 10 years	28	23.7	3	7.9		
	11 – 15 years	11	9.3	14	36.8	1	100
	16 – 20 years	5	4.2	14	36.8		
	Above 21 years	4	3.4	7	18.4		
	Total	118	100	38	100	1	100

The study also revealed that majority (40.7%) of the teachers were 31 – 35 years, 22.0% were 36 – 40 years while 19.5% of the teachers were 25 – 30 years of age. These above 40 years accounted for 14.4% of the total population of the teachers while only 3.4% were below 25 years old. For the head of institutions, the study established that majority (31.6%) were above 40 years of age, 28.9% and 23.7% of the head teachers were 36 – 40 years and 31 – 35 years respectively. The study further indicated that 15.8% of the head teachers were 25 – 30 years. From the findings it is evidenced that the responses were representative of all age bracket.

The study findings depict that majority (66.9%) of the teachers had a diploma in early childhood education as their highest academic qualification, 26.3% had P1 as their highest academic qualifications while 5.9% had bachelor degree while 0.8% had masters. About the head teachers 39.5% had P1 as their highest education qualification, 31.6% of the head teacher had diploma while 18.4% had bachelor degree as their highest academic qualification. From the study 10.5% of the head teachers had master degree as their highest education level. There was none of the respondents who had attained PhD. This means that all the teachers were qualified to effectively implement the curriculum and attain good performance.

On teaching experience, majority (59.3%) of the teachers had taught a period of not more than 5 years, 23.7% had taught for 6 – 10 years, 9.3% had taught for 11 – 15 years and 4.2% of the teachers had taught for 16 – 20 years while 3.4% had taught for more than 21 years. On head teachers experience the study shows that 36.8% of the head teachers had taught for 11 – 15 years and 16 – 20 years each, while 18.4% had taught for a period exceeding 21 years. Only 7.9% had taught for 6 – 10 years. The findings portray that the teachers had adequate teaching experience for curriculum implementation.

5.2 Descriptive Analysis of Study Variables

5.2.1 Monitoring of teaching and learning and implementation of CBC

The first objective sought to assess the effects of monitoring of teaching and learning on the implementation of CBC in Early Childhood Development (ECD) Centres in Meru central sub-

county. Teachers were asked to tick on the extent to which they agree with statements related to monitoring of teaching and learning. Findings are presented in Table 3.

Table 3 shows that a majority (93.2%) agreed with a mean of 4.36 and a standard deviation of 1.002 that head teacher frequently monitors lesson attendance for effective implementation of CBC, 6.8% of teachers were neutral on head teacher monitoring of the lesson attendance. However, 81.4% remained neutral (Mean=3.21, Std. Deviation=1.101) that their head teacher invites quality assurance officers in school, while 15.3% agreed and 3.3% disagreed with the statement. 83.9% of the teachers strongly agreed that head teacher provides teachers with the supervision report indicating areas of improvement (Mean=4.12, Std. Deviation=1.134), whereas 11.0% were neutral and 5.1% disagreed that the head teacher provides supervision report. ECDE teachers in Meru central sub county give extended work and evaluate as depicted by the teacher's strong agreements with the statement (Mean=4.50, Std. Deviation=1.090), this statement was support by a good majority of 99.1%, only 0.9% of the teachers remained neutral. The study also revealed that (44.0%) of the ECDE teachers agreed that the head teacher monitors learners' attendance to school (Mean=4.19, Std. Deviation=1.096), 32.2% of the teachers were neutral and 15.3% disagreed with the statement. These findings agree with Pangrazi and Beighle (2019) primary school principals must oversee curriculum implementation and offer sound suggestions on programs that will improve teaching and learning in their classrooms. Further a study by Sidow [30] contented that principal's supervision has a great influence on the implementation of the competency-based curriculum in public secondary schools in Mogadishu, Somalia [31-35].

The researcher conducted interviews among ECDE centres school head teachers to find out how monitoring of teaching and learning affect the implementation of CBC. The head teachers were asked how often they check teacher's school attendance, the results are as shown in table 4.

Findings from Table 4 indicated that 42.1% of head teachers monitors teacher's school attendance daily and weekly each, while 15.8% reported that they monitor attendance termly.

Table 3. Teachers’ responses on monitoring of teaching and learning

Statements	N	SA f %	A f %	N f %	D f %	SD f %	Mean	Std. Deviation
The head teacher frequently monitors lesson attendance	118	97.6	10185.6	76.8	00	00	4.36	1.002
The head teacher invites quality assurance officers in school	118	00	1815.3	9681.4	43.3	00	3.21	1.101
The head teacher provides teachers with the supervision report indicating areas of improvement	118	1210.2	8773.7	1311.0	65.1	00	4.12	1.134
Teachers give extended work and evaluate	118	4538.1	7261.0	10.9	00	00	4.50	1.090
The head teacher monitors learners attendance to school	118	97.6	4336.4	3832.2	1815.3	00	4.19	1.096
Valid N (listwise)	118							

Table 4. Head teacher’s response on teacher’s attendance monitoring

Valid		Frequency	Percent
	Daily	16	42.1
	Weekly	16	42.1
	Termly	6	15.8
	Total	38	100.0

From the Fig. 3, 21.05%, 39.47%, 26.32% and 13.16% of head teachers indicated that assessment of quality assurance officers based on daily, weekly, monthly and never assessed at all respectively.

From the findings majority 73.70% of the head teachers agreed that they were informed their weaknesses and areas to improve after they were assessed by quality assurance officers while 26.30% did not receive any feedback [36-38].

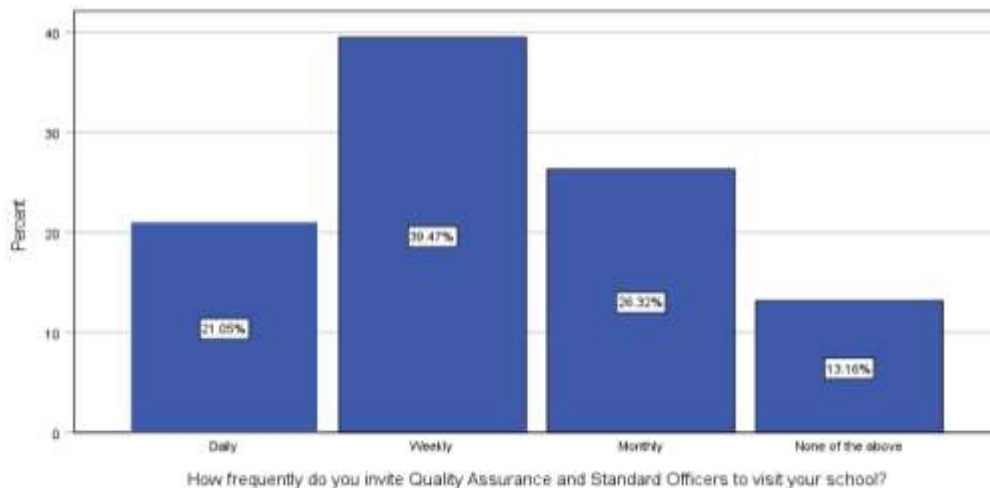


Fig. 3. Head teachers’ response on whether QASO’ visit their schools

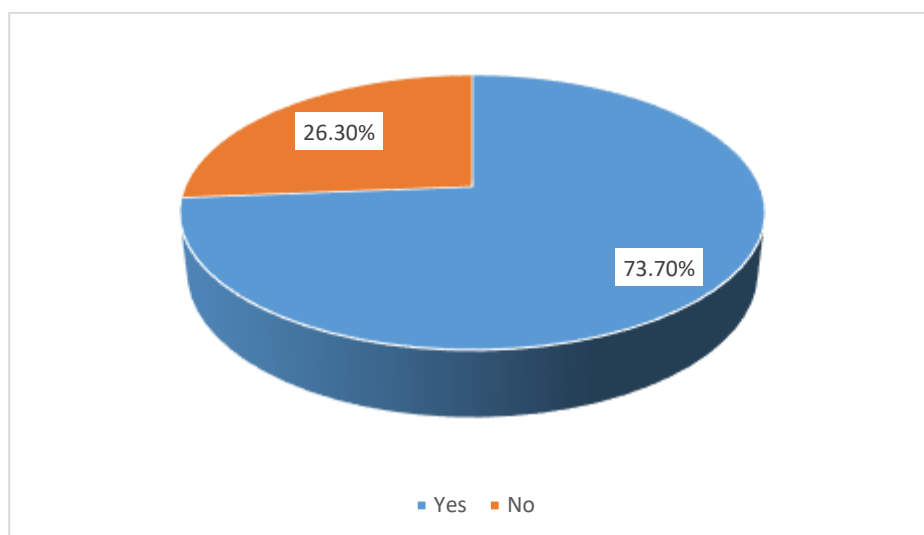


Fig. 4. Head Teachers response on whether they were informed on areas to improve by QASO

5.3 Inferential Statistics

The study used regression model to establish the relationship between the predictor (independent variable) and the dependent variable of the study. The provided regression model represents the anticipated connection as follows:

$$Y = \mu_0 + \mu_1 X_1 + \varepsilon$$

Where:

- Y = implementation of CBC
- μ_0 = constant or the intercept of the regression line
- μ_i = Coefficients of regression for the independent variable X_i
- X_1 = curriculum supervision and monitoring
- ε = the error term.

Tables 5, and depict the summary of multiple regression analysis.

It was evident from Table 5, that there was a strong correlation between the observed values of dependent variable and the values of dependent variable predicted by the multiple regression model ($R = 0.788$). In other words, there was a strong correlation between the predicted and observed values of CBC implementation. It can also be deduced from the value of R^2 in Table 5, that 62.1% of variance in the implementation of CBC could be explained by the effect of monitoring of teaching and learning. Table 6 shows the significance of the model.

In reference to Table 6, the F -ratio in the ANOVA table, has a value of 21.068 and a p value of 0.000. Since p was less than 0.05, it was deduced that the overall regression model was a good fit for the data. That is, the model, overall, resulted in a significantly good degree of prediction of the outcome variable. In other words, the independent variable statistically significantly predicted implementation of CBC ($F(3, 153) = 21.068, p < 0.05$). Table 7 shows the multiple regression model coefficients.

Table 7 presents data on how the independent variable contributes to the dependent variable, represented as beta weights. Assuming that the error term ε is zero and using unstandardized coefficients β values, we can derive the estimated multiple regression equation: $Y = 0.383 + 0.482 X_1$

The β values signify the individual impact of each predictor on the model while keeping all other predictors constant. In other words, when the monitoring of teaching and learning increases by one unit, the implementation of CBC is expected to increase by 0.482 units ($\beta = 0.482$), with other factors held constant. To make a fair comparison and improvement a better understanding of the predictors' importance, we utilized standardized β values, which are not influenced by the measurement units of variables. These standardized beta values indicate how many standard deviations the implementation of CBC would change due to a one standard deviation change in a predictor.

Table 5. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785 ^a	0.621	0.524	0.102

a. Predictors: (Constant), monitoring

Table 6. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.891	3	1.297	21.068	.000 ^b
	Residual	138.448	153	1.214		
	Total	142.339	156			

a. Dependent Variable: monitoring

b. Predictors: (Constant), implementation of CBC

Table 7. Summary of multiple regression model coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig. value
	Beta	Std. Error	Beta		
1 (Constant)	0.383	0.212		2.87	0.041
Monitoring	0.482	0.162	0.474	3.183	0.007

a. Dependent Variable: Implementation Of CBC

The table reveals that teacher motivation had substantial and statistically significant impact on the prediction of CBC implementation ($\beta = 0.561$, $p < 0.05$).

5.4 Summary of the Results

Findings show that head teacher frequently monitors lesson attendance for effective implementation of CBC and invites quality assurance officers in school. The head teacher provides teachers with the supervision report indicating areas of improvement. The study reported that ECDE teachers in Meru central sub county give extended work and evaluate and head teacher monitors learners' attendance to school. The head teachers reported that they monitor teacher's school attendance daily and sum up weekly, and they are they were informed their weaknesses and areas to improve after they are assessed by quality assurance officers

6. CONCLUSIONS

Teachers were prepared to implement CBC. Teachers held positive perceptions towards implementation of CBC as the head teachers were constantly following the curriculum implementation process right from classroom activities. Through provision of curriculum supervision feedback the teachers are able to effect areas of weakness and reinforce the strength for effective CBC implementation.

The head teachers are very supportive in the implementation of the CBC curriculum through provision of conducive learning environment for both learning and teaching to take place. Through the support of diverse teaching methodologies employed by the teachers, the teachers get motivated even to do better in the implementation of CBC.

7. RECOMMENDATIONS TO POLICY

- i. The ECDE teachers in collaboration with parents provide locally available teaching learning resources to ease implementation of CBC.
- ii. Head-teachers invite resources persons during Parents Teachers Association meetings to sensitize and create awareness of CBC to teachers and parents in fully supporting implementation of the curriculum.
- iii. The KICD should prepare soft copies of schemes of work and lesson plans for teachers in order to ease the burden.
- iv. The government should purchase more computers in schools for successful integration of technology in CBC program due to increasing population in schools. The purchasing of teaching and learning resources should also be prioritized especially for practical work and preparation of teaching aids for teachers.

- v. The head teachers should carry out regular classroom visits to ensure effective teaching, learning, and content delivery is in line with the recommended curriculum.

8. SUGGESTIONS FOR FURTHER RESEARCH

The researcher suggests the listed areas for further study.

- i. Similar study in public ECDE centres in another sub-county in Meru County to compare and contrast the findings.
- ii. A similar study should be conducted targeting other grades under CBC. This may be from grade one to six.
- iii. A study on preparedness of primary school administrators in implementation of CBC in the county.
- iv. A study to find out how the teachers' teaching methods influence the implementation of CBC in public primary schools in Kenya.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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