Effect of Instructional Supervision on Utilization of Teaching and Learning Resources for Implementation of CBC in Pre-Primary Classrooms in Webuye East Sub-County, Bungoma County, Kenya

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ABSTRACT

The competency-based curriculum was first offered to Kenyan schools in 2017 as a pilot program, and it was adopted in January 2019. As a drastic departure from the 8-4-4 education system, a new 2-6-3-3-3 system was established in 2017. This new system would require two years in preprimary, six in primary, three in junior secondary, three in senior secondary, and three in university. In the majority of English-speaking countries, competency-based curriculum (CBC) as an approach has resulted in substantive improvements to curriculum in a particular sector of the educational system. This study therefore set out to establish the influence of instruction supervision (InS) and utilisation of teaching and learning resources on the implementation of CBC in preprimary schools in Webuye East Sub-county, Kenya. The study was anchored on the Systems Theory of Educational Management by Kaufaman. The population of this study consisted of 316 respondents from Ndivisi, Mihuu, and Maraka wards in Webuye East sub-county, sampled purposefully and stratified by random sampling. They include the 157 head teachers who are charged with the role of supervision, 1 curriculum support officer who coordinates pre-school programmes at ward level, 157 pre-primary teachers, 1 CSO, and 1 QASO officer. A descriptive survey research design was used in the study. Data collection was conducted through questionnaires and interview schedules as well as classroom observation. Pearson product moment correlation was used to determine reliability. The quantitative evidence was presented using descriptive statistics such as frequency distribution tables and pie chart figures that displayed the results of the analysis. The study revealed that the teaching and learning resources are adequate. An observation confirmed that some subjects had so many books as compared to others. This, therefore, meant the suppliers of the books relied on non-existing statistics to supply the books. This study recommends that suppliers of the books be in constant touch with the head teachers so that the right and adequate resources are supplied in schools.

Keywords: CBC Implementation, Instructional Supervision, Pre-Primary Classrooms, Teaching and Learning Resources
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I. INTRODUCTION

Pre-primary education (P-PE) is the first stage of organised education. It helps in the grooming of young minds as well as the complex and full growth of infants. This stage of education helps children appreciate the value of learning and discipline by providing them with a structured learning environment. Preschools provide the right atmosphere and resources for young minds to grow and develop, allowing them to reach their full potential. Apart from the regular curriculum, kindergarten education requires a range of activities such as drawing, painting, clay work, craft work, singing, dancing, and other activities to keep younger children engaged in school (Daswani, 2000).

P-PE is acknowledged in Kenya as a key lever for achieving Education for All (EFA), Vision 2030, and the Sustainable Development Goals (SDGs). The Kenya Constitution (Government of Kenya [GoK], 2010) expressly delegated pre-primary education control to county governments in the fourth schedule. Furthermore, every Kenyan kid has a right to basic education under Articles 4(1)(f), 53(1)(6), and 55(a) of the Constitution. The county governments are responsible for ensuring that all children in their jurisdiction, regardless of their economic, social, or religious background, have access to a high-quality early childhood education. Furthermore, county governments are responsible for providing sufficient teaching and learning materials as well as maintaining a suitable learning

environment for students at that level. County governments must also offer free and mandatory P-PE, as well as establish programmes, legislation, and policies to guarantee that the right to P-PE is fulfilled. Additionally, Session Paper No. 2 of 2015 requires that health and nutritional support be provided to children ages 0–5 who attend daycare facilities, as well as that free and required PPE be provided (Ministry of Education [MOE], 2017).

Since 2017, Kenya's preprimary schools have operated and instructed children according to the tenets of Competency-Based Curriculum (CBC), a curriculum that emphasises the nuanced outcomes of a learning process (i.e., the information, abilities, and behaviours to be implemented by learners) rather than focusing exclusively on what learners are supposed to learn in terms of traditionally defined learning outcomes (Kaul, 2002).

IBE-UNESCO (2017) describes CBC as a curriculum that places a premium on the complex outcomes of the learning process (i.e., the knowledge, skills, and attitudes that learners are required to apply) rather than on the conventional topic content that learners are supposed to learn. They continue by stating that a curriculum that is learner-centred and flexible to changing conditions benefits students, educators, and society as a whole. Learners should be exposed to a range of educational activities and contexts in order to acquire and apply information, skills, and attitudes in real-world circumstances. These curricula are designed to emphasise a collection of critical competencies that may be cross-curricular or subject-specific in nature.

It focuses on the development of required skills, information, behaviours, and attitudes for doing different activities in order to minimise young and graduate unemployment. According to Wangeja (2010), CBC refers to a scenario in which information is produced rather than transferred and past knowledge has an effect on the learning process. Competence-based education (CBE) is a departure from traditional input-driven education, which emphasises knowledge growth. It emphasises the development of skills as a collection of values, attitudes, abilities, and information required to do various activities, rather than the development of particular abilities (Mulder, 2014).

In Kenyan schools, one of the responsibilities of the head teacher is to supervise classroom education and other school activities. The Kenyan government has placed a strong emphasis on oversight of schools and instructional methods through Education Commissions, the Basic Education Act (2013), and other government studies. Inspect any school at any time without prior notice and report their findings to the Director of Quality Assurance and Standards (Ministry of Education, Science and Technology [MOEST], 2000). By establishing the Standards and Quality Assurance Council (ESQAC), whose tasks include teacher evaluation and the maintenance of quality standards and relevance of education in basic education institutions, the Education Act of 2013 emphasises the necessity for instructional oversight.

Other significant and required purposes of supervision may include helping teachers improve their work performance as well as offering ethical, career-enhancing, and leadership-related guidance. In order to improve student learning outcomes through high academic achievement and high success rates, supervisors of instruction must focus on implementing best practices in the teaching-learning process (Southworth, 2002).

For effective teaching and learning, instructional tools are the primary means of communication in the classroom. It is just not possible to teach and learn without the use of instructional resources. These issues are relevant to the new CBC programme and may be resolved amicably via well-coordinated instructional supervision. According to Wiles and Bondi (2002), supervision is complemented by leadership, which assists teachers in counselling, planning, and debating methods to improve the teaching-learning environment at their schools. It is necessary for instructional supervisors and educators to work together in a dynamic manner. Thus, many educators view supervision in education, or "supervision of instruction," as a means of enhancing classroom instruction and learning (Mohanty, 2008). On this strength, the researcher sought to ascertain the influence of InS teaching and learning materials on the implementation of CBC in preprimary schools in Webuye East Sub County.

1.1 Statement of the Problem

In Kenya, CBC focuses on seven fundamental competencies: communication and teamwork, critical thinking and problem solving, creativity and imagination, citizenship, digital literacy, learning to learn, and self-efficacy. The acquisition of these skills goes hand-in-hand with the instillation of fundamental principles—love, responsibility, respect, unity, peace, patriotism, social justice, and honesty are some of these essential principles.

Since the government of Kenya introduced CBC and the piloting stage was done from pre-school to grade 3, in 2018, the curriculum has faced a number of challenges (GOK, 2018). Teacher unions, parent-teacher associations, and even the MoE have at some point identified the loopholes in the curriculum. The loopholes, if left, would compromise the quality of the outcome of the curriculum (MoE, 2000). The government, through the MoE and county government, has established and implemented a monitoring, evaluation, and reporting framework for pre-primary education facilities (MoE, 2000). Worse still, the much-seen mode of supervision is general supervision, which is more undertaken whenever an emergency crops up, like school unrests, infrastructural concerns, learners' health, or

poor pupil performance, at the expense of InS, which is described as comprising all efforts specifically oriented at establishing, sustaining, and improving the school teaching process.

Amukowa and Pale (2020) looked at the challenges of implementing CBC in Kenyan elementary schools. According to the study's results, the curriculum is not being implemented successfully in schools, and students' performance suffers as a result of a rushed and non-systematic planning and implementation process, with the majority of teachers having insufficient training on the curriculum's contents and teaching techniques, which tends to hamper their application of the curriculum's important knowledge and skills. Insufficiently approved texts for instructors and students, as well as instructional tools, can be covered with proper instructional supervision. It is with this that the researcher set out to determine the influence of instructional supervision and the utilisation of teaching and learning resources on the implementation of CBC in preprimary schools in Bungoma County, Kenya.

II. LITERATURE REVIEW

Preschools that are well-designed, with strong spatial and aesthetic qualities, good safety features, and appropriate materials, finishes, and furniture, contribute to favourable teaching and learning environments. A child's development and learning will be maximised if both parts of the learning environment are considered. Teaching programmes must be structured to work with the constructed environment, and vice versa, to create a positive preschool social environment. Teaching and learning activities should not hinder access but instead make use of the facility as it is designed. Loebach (2005) asserts that learning programmes must be supported by both social and physical factors in order for preschools to maximise child development. A successful interplay between the social and physical surroundings in preschool is essential to achieving preschool goals (Abbas, Othman, & Rahman, 2010).

The results of a study by Adeyemo (2012) in Lagos, Nigeria, on the effectiveness of laboratory equipment supplies and student performance revealed that the availability of physics teachers and laboratory facilities has a significant impact on the academic achievement of physics students. The importance of classrooms, laboratories, and stationery and teaching aids was revealed in a study by Olatunde and Otieno Omondi on learning resources and mathematics performance in Bondo district. According to Yadar (2007) and a UNESCO report (2008), teaching and learning resources such as textbooks, class rooms, teaching aids (chalk and board), stationery, and laboratories have an impact on the academic performance of the students.

Romano (2014) and Okoro (2004) discovered that instructional supervisors who identified and recommended appropriate instructional resources to teachers to improve the delivery of a specific curriculum boosted teacher instructional ability. The effective use of instructional tools improves a teacher's ability to convey information to students in a precise, proper, clear, and understandable manner (Saglam, 2011). Ballantyne and Packer (2009) found that experience-based learning led to more engaging, effective, and sustained learning. Hands-on ("what I did") and visual ("what I saw") learning experiences were more important to the students than teacher instruction, and three months following the programme, students still recalled more hands-on experiences than instructor-led instruction.

Gautam (2015) emphasises that without adequate teaching and learning resources, no effective teaching or learning can occur. This is also true for curriculum implementation. To ensure that the curriculum is implemented properly and according to plan, the government or Ministry of Education should provide schools with adequate resource materials, such as textbooks, teaching aids, and stationery, to enable instructors and students to perform their assigned roles during the curriculum implementation process.

Gautam (2015) continues by stating that the central government should also provide physical facilities like classrooms, laboratories, workshops, libraries, and sports grounds in order to foster an environment conducive to curriculum implementation. The execution of a curriculum is highly impacted by resources, such as the availability and quality of materials and appropriate facilities.

Uwezo Kenya (2016) reports indicate that educators are responsible for displaying and safeguarding all educational materials. The school must ensure the safety of the computers, LCDs, and other electronic devices. Disposal of the tools, on the other hand, can be problematic. The teacher, in accordance with current reforms, has in mind educational activities that are tailored to the abilities of certain students. Class size should also be taken into consideration. For pre-primary and primary school pupils in Kenya, following a government decree mandating a complete transition to basic education, classes might be 60 to 70 students in size. This calls into question the students' access to adequate resources. The use of teaching and learning tools should develop students' competencies.

Momanyi and Rop (2019) and Ondimu (2018) acknowledge that gaps and delays in the creation of educational materials with publishing companies have exacerbated the implementation dilemma's fluidity. Komba & Mwandanji (2015), on the other hand, indicate that digital literacy is a critical topic of study that is underutilised in many schools. It has been advised that teachers should receive continual training and reskilling through in-service and

online training to stay current on innovative and effective teaching tactics and document preparation. Additionally, the shortage of equipment, teacher readiness, and virtual assistance are all conceivable impediments to DL deployment at the low level (Maina & Waga, 2019; Njeru & Itegi, 2018; Ondimu, 2018).

Macharia and Kimani (2016) note that historically, the emphasis has been on accessibility, with ECDE classes located near elementary schools and separate ECDE buildings constructed, as well as teachers employed. Certain counties have spent virtually all of their resources on building and employment, leaving little money for instructional materials and inducting, training, and sustaining ECDE instructors. Indeed, county and national authorities have continued to dispute who is responsible for hiring teachers: the devolved counties or the national level, resulting in several court battles.

III. METHODOLOGY

A descriptive survey research design was adopted in this study. This strategy involves asking a large group of people, such as principals, teachers, and students, questions on a particular subject in a single sitting. The study was carried out in Webuye East Sub-county. This sub-county is found in Bungoma County, located at Latitude 0.56 and Longitude 34.56. The main economic activity is farming. Other sub-counties in Bungoma County include Mt. Elgon, Sirisia, Kabuchai, Bumula, Kanduyi, Webuye West, Kimilili, and Tongaren. Webuye East sub-county is home to three wards, namely, Ndivisi, Muhuu, and Maraka. The entire sub-county has a total of 157 preschools, spread as follows: Ndivisi has 48 schools, Maraka has 69 schools, and Muhuu has 40 schools. This means the sub-county is an area with a full interest in academia.

The population of this study consisted of all the 157 public preschools in Maraka, Mihuu, and Ndivisi wards of Webuye sub-county. Among those in charge of supervision are head teachers, Curriculum Support Officers, who coordinate pre-school programmes, pre-primary teachers, and QASO Officers, who are in charge of quality assurance in educational institutions.

The study set out to collect both qualitative and quantitative data from respondents. The study included 157 pre-school head teachers from all of the study area's schools, as well as 157 teachers from the same schools. 1 CSO and QASO officers are among the participants in the study. Census sampling was used to sample schools, head teachers, CSOs, and QASOs, whereas random sampling was used to sample teachers. Teachers were approached at random and asked to participate in the study by the researcher, owing to the fact that each school had a varied number of teachers handling the PP2 and preprimary sections. Data was collected using questionnaires, interview schedules, and observation.

IV. FINDINGS AND DISCUSSIONS

1.1 Demographic Data and Variables used in this Study
1.1.1 Distribution of Respondents

The study targeted 157 school heads and teachers from 157 pre-schools, 1 Curriculum Support Officer (CSO), and 1 Quality Assurance Officer (QASO). A total of 125 pre-school head teachers and 153 pre-school teachers responded to the study. The study also got responses from the Curriculum Support Officer (CSO) and Quality Assurance Officer (QASO).

Out of the 319 targeted respondents and questionnaires administered in the study, 283 were used for data analysis, while the rest were either wrongly filled out or incomplete, and others were not returned. Hence, these questionnaires were excluded from data analysis. The study managed a total of 125 questionnaires from the preschool head teachers, i.e., 80% out of the 157 teachers who were expected to fill the study questionnaires and 97% out of the 157 teachers who were expected to fill the study questionnaires.

Creswell (2014) observed that a 50% response rate is appropriate, a 60% response rate is good, and a response rate of more than 70% is extremely good when determining the minimum response rate percentage. Based on this claim, the current study's response rate of 89 percent is very good. According to the researcher, this high response rate can be attributed to data collection procedures that included pre-informing participants of the study's purpose and goals, administering a self-administered questionnaire, collecting the completed questionnaires within a short period of time, and making follow-up phone calls to clarify questions and prompt the respondents.

1.1.2 Qualification of the respondents

The study also sought to establish the qualifications of the respondents. This was coded into four identities, where 1 represented a certificate or diploma, 2 was a bachelor or postgraduate, 3 was coded to represent a master's,

and 4 was a doctoral qualification. The categorization of the respondents was to enable the researcher to understand the different levels of education of the respondents, as they are key to the study. Curriculum support officers, QASOs, and head teachers are expected to have higher qualifications as compared to teachers. This would maybe translate into proper supervision and guidance as cascaded downward.

Results indicate that the majority of the respondents, 195 (70%) were diploma/certificate holders, 62 (22%) were bachelors/PGDE holders, and 21 (7.6%) were masters holders. The study recorded no PhD holders. The findings therefore imply that the majority of the respondents had attained university education. This shows that all teachers had attained levels of education with a minimum P1 certificate; hence, they were in agreement with the Ministry of Education recommendations of 2008 that all teachers should attain pre-service training to make them suitable to conduct their teaching role among other responsibilities in the learning institutions. There could also be cases of teachers maintaining their entry qualification into service in the schools while others are upgrading to higher status.

1.1.3 School Ward

The researcher carried out the study in three wards, which were coded as follows: Mihuu Ward (1), Ndivisi Ward (2), and Maraka Ward (3). The results are indicated: Mihuu Ward registered 88 (31.7%) respondents, Ndivisi 94 (33.8%) respondents, and Maraka had 96 (34.5%) respondents. This implies that the study was balanced and that the data collected represented the entire study area and population. There were no indications of bias in the study by the researcher.

1.1.4 Instructional supervision of utilization of teaching and learning resources on the implemetation of Competecy Based Curriculum.

As a third goal, the research looked at the impact of instructional supervision on the usage of educational resources. Before beginning any curriculum implementation, it is critical to choose instructional resources that are both relevant and adequate, and that the materials also satisfy the needs of students while also fitting within the educational environment's limits. Since the CBC syllabus is new and only started a few years ago, textbooks and guidelines are required. If there are no adequate teaching and learning materials, then the implication is that the teachers may not be well prepared to handle the newly introduced activity areas since they are not equipped with instructional materials as opposed to the old activity areas, mathematics, and language activity areas, which are adequately equipped.

The researcher invoked the use of questionnaires for teachers and headteachers, observation schedules, and interviews for CSO and QASO to be able to get the required data for this objective. The teachers were asked through the questionnaire to indicate the availability and adequacy of the core teaching and learning resources. The feedback is summarised in Table 1.

Table 1
Availability of Instructional Materials According to Teachers

	Available and Adequate		Available by not adequate		Not available		Total				
	F	N %	F	N %	F	N %	Min	Max	Mean	Std. Dev.	Variance
Literacy activities	84	54.9%	66	43.1%	3	2.0%	1.00	3.00	1.47	0.54	0.29
Kiswahili activities	84	54.9%	49	32.0%	20	13.1%	1.00	3.00	1.58	0.71	0.51
Environmental activities	91	59.5%	59	38.6%	3	2.0%	1.00	3.00	1.42	0.53	0.29
English activities	102	66.7%	44	28.8%	7	4.6%	1.00	3.00	1.38	0.57	0.33
Creative arts activities	88	57.5%	53	34.6%	11	7.2%	1.00	4.00	1.51	0.66	0.44
Christian/ IRE activities	77	51.0%	67	44.4%	7	4.6%	1.00	3.00	1.54	0.59	0.34
Music activities	34	22.5%	66	43.7%	51	33.8%	1.00	3.00	2.11	0.74	0.55
Home science activities	9	5.9%	33	21.6%	111	72.5%	1.00	3.00	2.67	0.58	0.34
Digital devices	7	4.6%	40	26.1%	106	69.3%	1.00	3.00	2.65	0.57	0.32
Handbooks	53	34.6%	81	52.9%	19	12.4%	1.00	3.00	1.78	0.65	0.42

The results in Table 4.2 reveal that teachers felt that instructional materials for teaching mathematics, English, Kiswahili, literacy, environmental, creative arts, and Christian/IRE activities were available and adequate at 56.9%, 54.9%, 54.9%, 59.5%, 66.7%, 57.5%, and 51%, respectively.

However, guides and teacher guides were also available but not adequate at 52.9% and 65.4%, respectively, according to the teachers. Home science activities and digital devices were notably not available, according to 72.5% and 69.3% of respondents.

On observation, the researcher found out that instructional materials for teaching mathematics, English, Kiswahili, literacy, environmental, creative arts, and Christian/IRE activities were available and adequate depending on the number of learners in a class. It suggests that the resources were provided by the government through the Kenya Institute of Curriculum Development (KICD). However, the researcher found that all of the other activity areas were severely lacking in teaching resources.

One respondent comments that:

> I encourage teachers to distribute pupils' books to every child in a class, or at least one book per three children, where possible, so that everyone is able to follow. We also encourage schools to involve parents in different ways for effective CBC implementation.

When interviewed, curriculum support officers expressed concern that there had been little learning in these activity areas due to a lack of course materials and teacher manuals. Teachers were adapting resources from the previous curriculum while employing the new designs, creating a dangerous situation. Furthermore, handbooks were insufficient, implying that teachers were not properly trained in the use of instructional materials or their level of adherence to the curriculum design.

The findings that show that most schools have the necessary adequate teaching and learning resources paint a brighter side of things as compared to Mutisya (2010), who cited that under-resourcing and a scarcity of good teaching resources are widespread problems in schools, which makes implementation more difficult. Mutisya (2010) pleaded with the national government to provide schools with the resources they need to protect vulnerable students from the stress of persistent underachievement, which is exacerbated by a lack of resources and unfavourable learning conditions.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The study findings demonstrate that InS (Inspection and Supervision) plays a pivotal role in continually assessing and ensuring the availability of teaching and learning resources to support curriculum implementation. Head teachers have been proactive in authorising the acquisition of materials when shortages are identified. InS profoundly influences the execution of the curriculum by guaranteeing the presence of suitable learning resources tailored to the curriculum's requirements. Prompt resolution of identified issues is a key aspect of InS, contributing significantly to the successful implementation of the curriculum.

In conclusion, the study indicates that the school generally possesses sufficient teaching and learning resources, with a few exceptions. The flexibility provided by head teachers in allowing schools to procure additional resources ensures uninterrupted learning. However, in certain subjects, the available materials fall short of meeting the learners' needs. Notably, the study uncovers disparities in the distribution of books among different subjects, suggesting that book suppliers lack accurate statistics to guide their deliveries. To address this issue, the study recommends improved communication between book suppliers and head teachers to ensure the delivery of the correct and adequate resources to schools. Furthermore, it highlights consistent resource deficiencies in home science and digital literacy, suggesting a need for particular attention in these areas.

5.2 Recommendations

The study offers several key recommendations to address the resource deficiencies identified. First and foremost, it strongly advocates for immediate intervention by stakeholders, as the required resources were found to be absent even in local book centers. Additionally, the study suggests implementing a comprehensive needs assessment to determine the precise resource requirements of each subject. Furthermore, it recommends establishing a robust system for ongoing collaboration between book suppliers and educational institutions to ensure accurate and timely resource delivery. To bridge existing gaps, encouraging partnerships with local businesses and community organisations is another suggested avenue. Lastly, the study underscores the importance of regular audits to monitor and maintain resource adequacy in the long term.

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