



# School Instructional Materials and Implementation of Competence-Based Curriculum in Public Primary Schools in Meru South Sub-County, Tharaka Nithi County, Kenya

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## Abstract

The purpose of the study was to determine the preparedness of public primary schools for CBC implementation in Meru South Sub-County, Tharaka Nithi County, Kenya. One of the objectives that guided the study was to determine the school instructional materials preparedness for CBC implementation in public primary schools in Meru South Sub-County, Tharaka Nithi County, Kenya. Descriptive survey research design was used in the study where the researcher used interview schedules and questionnaires to collect data. The study findings were analyzed qualitatively and quantitatively. Data analysis and interpretation was done using SPSS version 26 and data presentation was done using tables and bar graphs. The study findings established that the school instructional materials are inadequate for Competence-Based Curriculum implementation. The researcher recommended that the government should ensure that the public primary schools have adequate instructional materials. The ministry of education should also ensure that text books and teacher guides for all grades in all the learning areas are available in schools and in good time. The ministry of education should also ensure that equipment that can be used in nurturing talents like singing and talents in games and sports are available in schools. The findings of this study may be helpful to the Kenyan institutions to sensitize them on areas to focus on that will lead to successful CBC implementation. Further research was proposed for the study on preparedness of private primary schools for Competence Based Curriculum Implementation in Kenya and a comparative study of public and private schools' preparedness for the implementation of Competence Based Curriculum in Kenya.

**Keywords:** School instructional materials, Teaching and learning materials, CBC implementation, Teaching and learning resources and Instructional tools.

## 1. INTRODUCTION

### 1.1. Background Information

Countries have done curriculum reforms and implemented Competence-Based Education (CBE) to empower learners with 21<sup>st</sup>-century skills and to enable them to have a competitive advantage in the job market. Rwanda prepared for the implementation of CBC by training teachers who were the curriculum implementers to equip them with skills. Teachers were trained in a cascade model according to Mulenga and Kabombwe (2019) where 100 national teacher trainers, three thousand district master trainers and 300 teachers received training from every district to serve all schools in all districts. Twenty-nine thousand subject school leaders for the newly introduced subjects in the curriculum according to Mulenga and Kabombwe (2019) were also trained and new books in line with the curriculum were supplied to schools. The country's goal was to produce learners who will create jobs and not seek for jobs. The researcher investigated the preparedness of public primary schools of Meru South sub-county as they implement CBC.

A study by Nsengimana (2020) on the opportunities and challenges for Competence-Based Curriculum implementation in Rwanda revealed that Rwanda faced challenges during the implementation of CBC which were associated with lack of teacher preparedness. The study findings also indicated that materials for teaching and learning were insufficient and interfered with the processes for teaching and learning where learners did not acquire adequate skills which hindered the teaching and learning processes in the ways hinted and desired by CBC. It was necessary for the researcher to investigate the

instructional materials preparedness of the public primary schools of Kenya if the country has to be victorious with CBC implementation as aspired.

### **1.2. Research Objective**

To determine the school instructional materials preparedness for CBC implementation in public primary schools in Meru South Sub-County, Tharaka Nithi County, Kenya.

### **1.3. Research Questions**

From the study objective, the researcher formulated the following research question.

1. How adequate are the school instructional materials for CBC implementation in public primary schools in Meru South Sub-County, Tharaka Nithi County, Kenya?

## **2. LITERATURE REVIEW**

Instructional resources are instructive tools intended for ease of learning. According to Eniayewu (2005), instructional tools lead to development in teaching and learning and allow teachers and students to engage in an environment managed for the best aims. They provide the teacher with real experiences as opined by Kamau (2018) and a basis for thinking and understanding. Instructional resources comprise tools used to support learning for better results. Instructional tools according to Odianwu and Azubike (1994) are classified into three main categories; the first category is visual which comprises of tools relating to sight, the second category is audio which comprises of tools relating to sound and the third category is audio-visual which comprise of tools which combine both sound and vision. Audio tools enhance instruction through hearing. They comprise; radio cassettes and gramophone. Visual tools aid instruction through sight visually and they help learners appreciate the importance of ideas and details. They include; maps, samples, images, and charts. Audio-visual combines both audio and visual tools such as television sets and videos.

Instructional resources according to Abdullahi (2019) are the primary communication channel in the classroom and enhance effectiveness of teaching and learning. In the instructional process it is inappropriate to teach without using instructional tools. Instructional tools capture and maintain the interest of learners as opined by Samson and Adeleke (2020) and allow learners to realize themselves and their abilities. Instructional tools include; realia, models, books, images, chalkboards, motion pictures, radio, compact disc, television, materials from the internet, globe, laboratories, museums and materials from digital devices like mobile phones. In supporting teaching and learning instructional resources are critical because they attract the body senses by making complex concepts real, raising the learners' curiosity and enthusiasm and aiding learning for an effective instructional process. Teachers need to be widely familiarized with the instructional resources available.

Modern technology has enriched educational resources through multimedia learning resources. Material resources comprise of; textbooks, charts, maps and audiovisual as stated by Akungu (2014) and digital instructional materials such as; radio, tape recorder, television, videotape recorder and mobile phones. Other types of instructional materials as pointed out by Atkinson (2000) include papers and materials for writing like; pens, erasers, exercise books, crayons, chalks, drawing books, notebooks, pencils, rulers, colors and workbooks. A study done by Paulína and Miroslav (2019) on Home-based parental involvement and parental participation to investigate the association between student's achievement in mathematics in grade four and learning resources across European Education Systems found out that; students who can access more learning resources perform better in Mathematics. A case study by Moshia (2012) on learning materials used to deliver knowledge and skills for CBC in Tanzania revealed that; the CBC curriculum was introduced in 2005 and the teacher's guide books were not published until 2007 so they were not available in schools. The findings from the study showed that; textbooks for use at the same time with the new curriculum were released slowly from grade one to grade seven and were yet to reach schools. The study findings also showed that; teachers were inadequately prepared and were not using teaching and learning materials during classroom teaching. The researcher investigated the school instructional materials preparedness for CBC implementation in public primary schools.

There is a strong positive significant relationship according to Adeogun (2001), between academic performance and instructional resources. Schools with adequate materials as stated by Adeogun (2001)

post a better performance than schools with inadequate materials. Academic performance in private schools is better than that of public schools according to Babayomi (1999) because instructional materials are usually available and are adequate. A study by Abdullahi (2020) on school-based factors influencing CBC implementation in public pre-schools in the Garissa sub-county revealed that; public pre-schools had enough instructional materials such as textbooks and teacher guide books, had average ICT resources and the schools had sufficient equipment for audio-visual. Another study by Diana (2020) on constraints experienced by educators in CBC programs implementation in Laikipia East Sub County showed that; it was challenging to teach subjects such as Home Science, Music and Digital Literacy due to lack of adequate instructional materials as well as teacher competence. An article by Nombo (2022) on the challenges of CBC in the teacher training colleges of Tanzania established that; materials for teaching and learning were not adequate. A study by Diana (2020) also revealed that; the textbooks in the schools were adequate although, large size of classes was a challenge. An article written by Erah and Dairo (2009) on challenges of the application of learning management systems of pharmacy students in patient-oriented pharmacy education in Benin revealed that; there were limited number of computer facilities, there was limited access to computers and regular electric failure. The study endeavored to establish the school instructional materials preparedness of public primary schools for CBC implementation in Kenya.

Findings of Muasya and Waweru (2019) study on challenges facing the successful implementation of CBC in Machakos County established that; the schools had a shortage of instructional materials compared to the number of pupils. Another study by Abdullahi (2019) on school-based factors influencing CBC implementation in public pre-schools in Garissa Sub- County revealed that; the teaching and learning resources like textbooks and teacher guides were adequate. The study findings also showed that; in 50% of the schools' ICT equipment were available nevertheless, the schools did not have sufficient audiovisual equipment. Availability of teaching and learning materials is directly proportional to academic performance and therefore, it was important for the researcher to establish the school instructional materials preparedness in the Kenyan public primary schools if the country has to emerge successful with CBC implementation as planned.

### **3. RESEARCH METHODOLOGY**

#### **3.1. Research Design**

The study used descriptive survey research design to establish the school instructional materials preparedness for CBC implementation in public primary schools in Meru South Sub- County, Tharaka Nithi County, Kenya.

#### **3.2. Population and Sample**

Meru South Sub- County has 84 public primary schools which include 74 public day primary schools and 10 public boarding primary schools. From a population size of study arrived at using Krejcie and Morgan (1970) table for determining the size of the sample. 70 head teachers from the chosen 70 primary schools responded to the questionnaires. There are 616 TSC teachers in the public primary schools of Meru south Sub County and teachers were the main respondents for this study. From the selected 70 schools, the researcher purposively selected 294 teachers with the help 84 primary schools 70 primary schools were the sample size for this of the head teacher who responded to the questionnaires. The Curriculum Support Officer of Meru South Sub- County was interviewed by the researcher on the preparedness of public primary schools to implement Competence-Based Curriculum.

#### **3.2. Data Analysis**

The type of data that was generated from this research was qualitative and quantitative in nature. After data collection, data coding and analysis was done using Statistical Package for the Social Sciences (SPSS) version 26. Qualitative data was analyzed continuously from the beginning of fieldwork to determine; patterns, categories and themes. Descriptive statistics for example; frequency, mean, percentages and standard deviation with the help of SPSS version 26 were used to analyze quantitative data. Testing of the null hypothesis was done using chi-square at  $\alpha = 0.05$  significance level. The open-ended items were analyzed with the study objectives as the main themes and patterns. The fundamental themes forthcoming from the study were guided by the conceptual and theoretical frameworks. Presentation of analyzed data was done using tables and bar graphs. The following decision criteria was

used to interpret the mean of the responses for the five-point likert scale questions; an average score ranging from 4.20 to 5.00 implied that the respondents agreed strongly with the statement, an average score ranging from 3.40 to 4.19 implied that the respondents agreed with the statement. An average score ranging from 2.60 to 3.39 implied that the respondents were undecided about the statement. An average score ranging from 1.80 to 2.59 implied that the respondents disagreed with the statement. An average score ranging from 1.00 to 1.79 implied that the respondents strongly disagreed with the statement. Data analysis as stated by Kombo and Tromp (2006) is the procedure of examining the information derived from the experiments or surveys and making inferences and deductions.

**4. RESULTS AND DISCUSSION**

**4.1. School Instructional Materials Preparedness for the Implementation of Cbc**

The researcher endeavored to establish the school instructional materials preparedness for CBC implementation in public primary schools in Meru South Sub- County to satisfy the objective of this study. The researcher included items on the questionnaires seeking to establish school instructional materials preparedness for CBC implementation. A likert scale with five points which ranged from strongly agree to strongly disagree rated the opinions of teachers and the results are presented in Table 1.

**Table 1. School Instructional Materials Preparedness for the Implementation of CBC**

<b>Statement</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
The school has adequate textbooks and teachers' guides for all grades	290	3.72	0.73
The school has teaching aids and charts for teaching and learning	290	3.33	0.82
The school has ICT-based instructional-learning materials	290	3.28	0.69
The school has audiovisual materials	290	3.03	1.00
The school has musical instruments	290	1.06	0.24
The school has drawing books and crayons	290	1.19	0.73
The school has adequate pupils' exercise books	290	4.00	0.00
The school has learner assessment books	290	1.02	0.25
The school has farm tools for agriculture	290	1.00	0.25
The school has a home science equipment	290	1.01	0.08

An average mean of 3.72 from the information of the results on Table 1 revealed that teachers agreed that the schools have adequate textbooks and teacher guides for all grades. An average mean of 3.33 from the information of the results on Table 1 revealed that teachers were undecided on whether or not the schools have teaching aids and charts for teaching and learning. The information of the results on Table 1 revealed that teachers were undecided on whether or not the schools have ICT based instructional learning materials as revealed by an average mean of 3.28. An average mean of 3.03 from the information of the results on Table 1 revealed that teachers were undecided on whether or not the schools have audiovisual materials. An average mean of 1.06 from the information of the results on Table 1 revealed that teachers strongly disagreed that the schools have musical instruments. An average mean of 1.19 from the information of the results on Table 1 revealed that teachers strongly disagreed that the schools have drawing books and crayons.

An average mean of 4.00 from the information of the results on Table 1 revealed that head teachers agreed that the schools have adequate pupils' exercise books. An average mean of 1.02 from the information of the results on Table 1 revealed that teachers strongly disagreed that the schools have learner assessment books. The information of the results on Table 1 revealed that teachers strongly disagreed that the schools have farm tools for agriculture as revealed by an average mean of 1.00. The researcher found out that learners carry farm tools from home for doing the Agricultural activities in school. An average mean of 1.01 from the information of the results on Table 1 revealed that teachers strongly disagreed that the schools have Home Science equipment. The researcher established that learners carry cooking apparatus like sufurias and items to cook to school. Diana (2020), agrees with the findings by noting that teaching of Home Science in Laikipia East Sub- County was a challenge due to lack of adequate instructional materials as well as teacher competence.

To ascertain whether the responses given by teachers were in agreement, the researcher presented the same constructs to head teachers to seek their opinion on school instructional materials preparedness for the implementation of CBC and the findings are presented in Table 2.

**Table 2.** *School Instructional Materials Preparedness for CBC Implementation*

<b>Statement</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
The school has adequate textbooks and teacher guides for all grades	68	4.16	0.64
The school has teaching aids and charts for teaching and learning	68	2.79	1.19
The school has ICT- based instructional learning materials	68	3.50	1.01n
The school has audio visual materials	68	3.19	1.18
The school has musical instruments	68	1.25	0.68
The school has drawing books and crayons	68	1.63	1.14
The school has adequate pupils exercise books	68	4.16	0.97
The school has learner assessment books	68	1.94	1.60
The school has computers which are used for teaching and learning	68	3.38	1.14

An average mean of 4.16 from the information of the results on Table 2 revealed that head teachers agreed that the schools have adequate textbooks and teacher guides for all grades. Abdullahi (2020) agrees with the research findings by noting that teaching and learning materials which include textbooks and teachers guide books in the public pre-schools in Garissa Sub- County were adequate. Similarly, Diana (2020) agrees with these findings by noting that the schools in Laikipia East Sub- County had adequate textbooks. However, Nombo (2022) contradicts these findings by noting that the teaching and learning materials were insufficient in the teacher colleges of Tanzania which affected greatly the processes of teaching and learning. Moshia (2012) extends the contradiction in the observation that CBC curriculum in Tanzania was introduced in 2005 and the teacher guides were not published until 2007 and that in Tanzania the textbooks to be used with the new curriculum were released slowly from grade 1 to grade 7 and were yet to reach schools. (Isaboke et al., 2021) study disagreed with these findings by noting that shortage of materials for teaching and learning was a challenge experienced in CBC implementation in Kenya. Muasya and Waweru (2019) also contradicts these study findings by remarking that inadequate materials for teaching and learning was a constraint facing successful implementation of CBC in Machakos County.

An average mean of 2.79 from the information of the results on Table 2 revealed that head teachers were undecided on whether or not the schools have teaching aids and charts for teaching and learning. An average mean of 3.50 from the information of the results on Table 2 revealed that head teachers agreed that the schools have ICT based instructional learning materials. An average mean of 3.19 from the information of the results on Table 2 revealed that head teachers were undecided on whether or not the schools have audiovisual materials. Abdullahi (2020) contradicts these findings by noting that the schools in Garissa Sub- County had adequate audiovisual equipment. An average mean of 1.25 from the information of the results on Table 2 revealed that head teachers strongly disagreed that the schools have musical instruments. Diana (2020) agrees with these findings by noting that teaching of music in Laikipia East Sub- County was a challenge due to lack of adequate instructional materials as well as teacher competence. An average mean of 1.63 from the information of the results on Table 2 revealed that head teachers strongly disagreed that the schools have drawing books and crayons. An average mean of 4.16 from the information of the results on Table 2 revealed that head teachers agreed that the schools have adequate pupils' exercise books. An average mean of 1.94 from the information of the results on Table 2 revealed that head teachers strongly disagreed that the schools have learner assessment books. The researcher established that the learner assessment books are bought by parents for their children on yearly basis. An average mean of 3.38 from the information of the results on Table 2 revealed that the head teachers were undecided on whether or not the schools have computers which are used for teaching and learning.

Further validation of the descriptive analysis was done by engaging the CSO on the interview. The findings are illustrated in excerpt 1.

**Excerpt 1**

**Researcher:** How are the public primary schools prepared on school instructional materials for the implementation of CBC?

**Respondent:** The government has provided and is still providing instructional materials to schools such as text books and teacher guide books. The government has provided the schools with Teacher Digital Devices (TDD), Learner Digital Devices (LDD), laptops and projectors to promote digital

literacy to learners. The government has been funding schools where the money should be used to purchase other teaching and learning materials needed in schools.

From the findings of research on instructional materials preparedness for CBC implementation it is evident that instructional materials have been availed in the public primary schools by the government. However, the demand for many more materials is there due to the practical aspect of CBC. It is therefore imperative that the parents continue supporting their children with the learning materials as needed and as curriculum demands.

#### *4.1.2. Pupil Textbook Ratio*

The researcher sought for the pupil textbook ratio in the sampled schools and the results are presented in Table 3.

**Table 3.** *Pupil Textbook Ratio*

<b>Textbook ratio</b>	<b>Number of teachers</b>	<b>Percentage %</b>
1:1	243	83.79
1:2	38	13.10
1:3	9	3.10
Total	290	100

The information of the results on Table 3 indicates that the pupil textbook ratios in the public primary schools of Meru South Sub-county are 84% for 1:1 which indicates that 1 textbook : 1 student, 13% for 1:2 which implies that 1 textbook: two students and 3% for 1:3 which indicates that 1 textbook: three students. The above ratios indicate that majority of the schools in Meru South Sub-county have adequate textbooks.

#### **4.2. Interpretation of Results**

The researcher established that schools have adequate textbooks where the pupil textbook ratio is 1:1 in most schools. Students' books and teachers' guides for all grades were adequate in all schools according to the study findings. Teachers were undecided on whether or not schools have teaching aids and charts for teaching and learning according to the study findings. Teachers were undecided on whether or not schools have ICT-based instructional learning materials from the study findings. Teachers were undecided on whether or not the schools have audio visual materials from the study findings. Schools do not have musical instruments as indicated by the study findings. Parents buy drawing books and crayons because schools do not provide them as established by the researcher. The study further established that schools have adequate pupil's exercise books. The researcher further found out that schools do not have learner assessment books they are bought by parents. Students carry farm tools for Agriculture from home because they are not available in schools as established by this study. Home Science room and Home Science equipment are lacking in schools as indicated by the study findings. The study further established that schools do not have musical instruments.

#### **5. CONCLUSION**

The researcher concluded that the school instructional materials are inadequate for Competence-Based Curriculum implementation where musical instruments, drawing books and crayons, learner assessment books, farm tools for agriculture and home science equipment are lacking in schools.

#### **6. RECOMMENDATION**

1. The government should make sure that the public primary schools have adequate instructional materials such as digital devices for teachers and students and also provide learner assessment books, drawing materials and colors to shoulder parents the burden of providing such materials.
2. The ministry of education should ensure that text books and teacher guides for all grades in all the learning areas are available in schools in good time.
3. The ministry of education should ensure that equipment that can be used in nurturing talents like singing such as musical instruments and talents in games and sports like balls and nets among others are available in schools.

### **6.1. Suggestions for Further Studies.**

The following are the suggestions for further research.

1. Preparedness of private primary schools for Competence Based Curriculum implementation in Kenya.
2. Influence of teachers and parents' attitude on the implementation of Competence Based Curriculum in Kenya.
3. Comparative study of public and private schools' preparedness for the implementation of Competence Based Curriculum in Kenya.

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