



Teacher Staffing Adequacy and Implementation of the Competency Based Curriculum in Public Junior Secondary Schools in Mukaa Sub-County, Makueni County, Kenya

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ABSTRACT

The study examined the influence of teacher staffing adequacy on the implementation of the Competency Based Curriculum (CBC) in public Junior Secondary Schools in Mukaa Sub-County, Makueni County, Kenya. Adequate teacher staffing is essential for effective curriculum delivery because CBC requires teachers to facilitate learner-centered instruction, continuous assessment, practical activities, and individualized support. The study sought to determine whether the availability and adequacy of teachers influenced the extent to which CBC was implemented in public Junior Secondary Schools. A descriptive survey research design was adopted. Data were collected from teachers and head teachers in public Junior Secondary Schools using questionnaires. The reliability of the instruments was established through the test-retest method, with reliability coefficients of $r = 0.725$ for teachers and $r = 0.714$ for head teachers, indicating acceptable reliability. Data were analyzed using descriptive and correlational statistics with the Statistical Package for Social Sciences (SPSS) version 29. The findings established a strong positive relationship between teacher staffing adequacy and CBC implementation, with a correlation coefficient of $r = 0.740$. The finding indicates that schools with adequate teacher staffing were more likely to implement CBC effectively. Sufficient staffing enables teachers to manage their teaching responsibilities, provide learners with appropriate attention, conduct continuous assessment, and facilitate activities aimed at developing learners' competencies. Conversely, inadequate staffing may increase teachers' workloads and limit their ability to provide effective learner support and implement competency-based approaches as intended. The study concluded that teacher staffing adequacy is an important determinant of effective CBC implementation in public Junior Secondary Schools in Mukaa Sub-County. It recommends that the Ministry of Education and other relevant authorities ensure adequate and appropriately specialized teachers are deployed to Junior Secondary Schools based on enrolment and curriculum requirements. Strengthening teacher staffing would enhance effective curriculum delivery and improve the achievement of CBC objectives.

Keywords: Teacher staffing adequacy, Competency Based Curriculum, curriculum implementation, Junior Secondary Schools, teacher deployment, Makueni County, Kenya.

INTRODUCTION

The success of any education system depends largely on the availability of qualified and adequate teachers to facilitate teaching and learning. UNESCO (2021) recognizes education as an important driver of social and economic development. For education to achieve this role, schools need sufficient teachers with the knowledge and skills required to support learners. The introduction of the Competency Based Curriculum (CBC) has further increased the responsibilities placed on teachers because the curriculum emphasizes learner participation, practical skills, problem solving, critical thinking, collaboration, and learner autonomy (Muchira, Morris, Wawire, & Oh, 2023). Adequate teacher staffing is therefore important in ensuring that these expectations are achieved in schools.

The implementation of CBC in different countries has shown that teachers are central to the success of curricu-



lum reforms. Muchira et al. (2023) note that teacher preparedness is among the school-level factors that influence effective CBC implementation. Teachers are expected to guide learners through various activities, assess their progress continuously, and provide support according to individual learning needs. When a school has fewer teachers than required, teachers may have large workloads and limited time to give adequate attention to individual learners. This can affect the extent to which learner-centered teaching and other CBC practices are implemented.

Similar challenges have been reported in African countries that have adopted CBC. Tanzania introduced CBC in 2005 with the intention of developing practical skills and competencies that would prepare learners for the demands of the labor market (Assey, 2022). However, inadequate teacher preparedness affected its implementation. Mabonga (2021) also identifies limited opportunities for teacher training as one of the challenges affecting CBC implementation in Uganda. These experiences demonstrate the importance of having teachers who are both adequate in number and sufficiently prepared to deliver a competency-based curriculum.

In Kenya, the transition from the 8-4-4 system to CBC has changed the role of the teacher from mainly transmitting knowledge to facilitating learning and developing learners' competencies. This requires teachers to use appropriate teaching approaches, organize learner activities, provide continuous assessment, and respond to different learner needs. However, teacher competency and preparedness remain challenges in the implementation of CBC (Ng'andu, 2022; Nyaboke, Kereri, & Nyabwari, 2021). At the Junior Secondary School level, the situation is of particular concern because some subjects require teachers with specific training and subject specialization. Gichuru (2024) and Makori (2026) report shortages of trained teachers to handle specialized subjects in Junior Secondary Schools.

In Mukaa Sub-County, Junior Secondary School classes are domiciled in primary schools as part of the education reforms introduced in Kenya (Presidential Working Party on Education Reform, 2022). The Sub-County faces challenges associated with inadequate qualified human resources, which may affect the effective delivery of CBC (Kawinzi & Simiyu, 2025). Despite these concerns, there is limited empirical information on how teacher staffing adequacy specifically affects CBC implementation in public Junior Secondary Schools in Mukaa Sub-County. This study therefore seeks to establish the influence of teacher staffing adequacy on the implementation of Competency Based Curriculum in public Junior Secondary Schools in Mukaa Sub-County, Makueni County, Kenya.

Statement of the Problem

The implementation of the Competency Based Curriculum (CBC) in Kenya has changed teaching and learning by emphasizing the development of practical skills, competencies, creativity, collaboration, communication, critical thinking, and problem solving. Despite these changes, the implementation of CBC in Junior Secondary Schools continues to experience challenges, including inadequate teacher staffing. Teacher availability is important because CBC requires teachers to guide learners through learner-centred activities, practical tasks, projects, assessments, and other competency-based learning approaches. Where schools have fewer teachers than required, teachers may have large workloads, limited time for individual learner support, and difficulties in preparing and assessing learners effectively. These challenges may affect the extent to which CBC is implemented as intended.

Although studies have examined challenges affecting CBC implementation in Junior Secondary Schools, limited attention has been given to the specific influence of teacher staffing adequacy on CBC implementation in public Junior Secondary Schools in Mukaa Sub-County, Makueni County. In particular, there is limited local evidence showing whether the number and adequacy of teachers available in these schools support or constrain effective curriculum delivery. This creates a contextual gap that requires empirical investigation. Therefore, the study seeks to establish the influence of teacher staffing adequacy on the implementation of Competency Based Curriculum in public Junior Secondary Schools in Mukaa Sub-County, Makueni County, Kenya.

REVIEW OF RELATED LITERATURE

Teacher staffing adequacy refers to the number of qualified teachers working in a given school against the number of learners, their qualifications and specializations. The number of teachers in a public school is largely determined by the number of learners enrolled in that particular school. However, there are other extraneous factors that may lead to understaffing or overstaffing of some schools. Key among them is the location of the school (Tumuheise, et al. and Nachuha, 2023). The number of teachers in a school against the number of learners will determine the teacher to learner ratio in a classroom. The government's benchmark standard teacher to learner ratio is 1:40 but in most public schools this ratio is exceeded. According to Makori A. (2026) when a school exceeds the recommended teacher-learner ratio there is a likelihood of reduced teacher-learner interaction. This may not offer the teacher the opportunity to attend to individual learner's needs. However, when the class size is limited, it enables teachers to attend to individual learner's needs and even support those who may be having learning difficulties. This may in turn lead to increased learning outcomes and improved individual performance.

A number of empirical studies have been conducted on how the teacher staffing adequacy affects the implementation of a curriculum. In a study conducted in Uganda by Kidega, Song and Khaing (2023), it was established that the average teacher-student ratio in public primary schools was 1:70. This high ratio had negatively affected the implementation of the CBC in the country. Other factors that had impeded the implementation CBC in the country were inadequate funding, inadequate monitoring and supervision, inadequate infrastructure, lack of stakeholders' participation. The study identified some of the factors that facilitated the implementation of CBC as effective leadership, student-centered instruction approaches and teacher motivation (Kidega, Song and Khaing, 2023).

Isaboke, Mweru and Wambiri (2021) conducted a study on the teacher preparedness and implementation of Competency Based Curriculum in pre-primary schools in Nairobi City County, Kenya. The study sampled 180 respondents using the simple random sampling technique and the questionnaire as the main data collection instrument. The findings showed that all the 225 ECD centers had a total of 750 teachers. This shows that there were three teachers per center. This implies that there is a shortage of teachers in these centers. Therefore, the ratio of teacher to learner is very high, a factor that negatively affects the quality of the instruction rendered to learners because the teacher may not be able to address individual learner's needs yet this is one of the guiding principles of the CBC. The study further showed that only 34.1% of the teachers had received adequate training on CBC implementation. This can be attributed to low teacher staffing level in the pre-schools against the high population of learners (Isaboke, Mweru and Wambiri, 2021).

Another study entitled 'Implementation of Competency- Based Education (CBC) in Kenya: Challenges and opportunities.' Carried out in Meru County by Ogembo (2024) at the Junior Secondary school level avers that large class sizes limit a teacher to implement new skills. The study further suggests that understaffing leads to increased workload as well as limited learner supervision. This in turn results to reduced effectiveness in teaching and learning thus ineffective CBC implementation. The high teacher-learner ratio posed a great challenge to the instructional methods applied by the teachers because they could not give individualized attention to learners.

Another study on the impact of teacher training on effective implementation of CBC in public primary schools in Uasin Gishu County was carried out by Jepkosgei, Waswa and Kipkoech (2022). The study utilized mixed methods to collect both qualitative and quantitative data from a sample size of 455 respondents comprising of head teachers, teachers and Sub-County Directors of Education. The study applied stratified random sampling technique to collect data using the questionnaire and interview schedules as the main data collection instruments. The findings showed that the teachers who had been trained on the CBC had better outcomes in terms of the implementation of the curriculum unlike those that had not properly been trained. From these empirical studies, it is evident that staffing ratio in schools can have an impact on the implementation of the curriculum as studies have shown elsewhere. However, none of the studies was done in Mukaa Sub-County. Therefore, there is a gap that this study intends to fill.



Theoretical Framework

This study was guided by the Curriculum Implementation Theory developed by Gross (1971) and later revised by Rogers (1981). The theory explains that effective curriculum implementation depends on conditions within the school. These include support from school management, teacher competence, availability of teaching and learning resources, and regular monitoring of curriculum activities. School management is expected to provide the resources required for teaching, including textbooks, teaching aids, classrooms, laboratories, and other necessary facilities. Teachers are the main implementers of the curriculum and therefore need adequate knowledge, skills, and understanding of the new curriculum. Their ability to implement curriculum changes can be improved through training and professional development. The theory is relevant to this study because it recognizes the importance of adequate teachers and supportive school conditions in curriculum implementation. It therefore provides a basis for examining how teacher staffing adequacy influences the implementation of Competency Based Curriculum in public Junior Secondary Schools in Mukaa Sub-County, Makueni County.

RESEARCH METHODOLOGY

The study used a mixed-methods approach, combining quantitative and qualitative methods. A descriptive survey design was employed to examine the factors affecting the implementation of Competency Based Curriculum in public Junior Secondary Schools in Mukaa Sub-County. The study targeted 292 respondents, comprising 206 teachers, 85 head teachers and one Sub-County Director of Education. A sample of 89 respondents was selected, including 62 teachers, 26 head teachers and one Sub-County Director of Education. Data were collected using questionnaires, an interview guide and an observation checklist. The instruments were piloted in Kilungu Sub-County to assess their suitability, validity and reliability. Reliability was established through the test-retest method, which produced coefficients of 0.725 for the teachers' questionnaire and 0.714 for the head teachers' questionnaire. Quantitative data were analyzed using frequencies, percentages, means, standard deviations and Pearson's Product Moment Correlation. Qualitative data obtained from interviews and open-ended questions were grouped into themes and presented in narrative form.

RESULTS AND DISCUSSIONS

The findings of the study are presented as follows:

Teacher Workload and Teacher-Learner Ratio

The study sought to establish the influence of teacher workload and teacher-learner ratio on the implementation of the Competency Based Curriculum in public Junior Secondary Schools in Mukaa Sub-County, Makueni County, as presented in Table 1.1.

Table 1.1: Teacher staffing and Learner Distribution in selected JSS in Mukaa Sub- County

School Code	No. of Grade 7 Learners	No. of Grade 8 Learners	No. of Grade 9 Learners	Total learners	No. of trained teachers	Teacher Deficit
A	84	83	97	264	7	5
B	71	80	76	227	7	4
C	20	28	35	83	3	2
D	26	28	22	76	3	2
E	54	56	96	206	6	4
F	56	53	49	159	5	3
Average	52	55	63	169	5	4

Source: Research Data (2026)

The findings in Table 1.1 revealed that public Junior Secondary Schools in Mukaa Sub-County had an average of 169 learners, comprising 52 learners in Grade Seven, 55 in Grade Eight and 63 in Grade Nine. The schools had an average of five trained teachers, giving a shortage of about four teachers per school. The head teachers indicated that the shortage affected the delivery of the Competency Based Curriculum. The findings also revealed an average teacher-learner ratio of 1:34. Despite appearing manageable, this ratio may make it difficult for teachers to give learners adequate individual attention, conduct continuous assessment, supervise group activities and support project-based learning. Schools with higher enrolment had heavier teacher workloads, with teachers handling several learning areas alongside extra lessons and other school duties. Consequently, inadequate staffing limited regular learner assessment and feedback and made curriculum delivery more demanding. The findings agree with Nyamosi (2024) and KICD (2023), confirming that teacher shortages and high teacher-learner ratios hinder effective CBC implementation in Mukaa Sub-County.

Extent to Which Staffing Adequacy Influences the Implementation of CBC in JSS

The study examined the extent to which teacher staffing adequacy influences CBC implementation in Junior Secondary Schools.

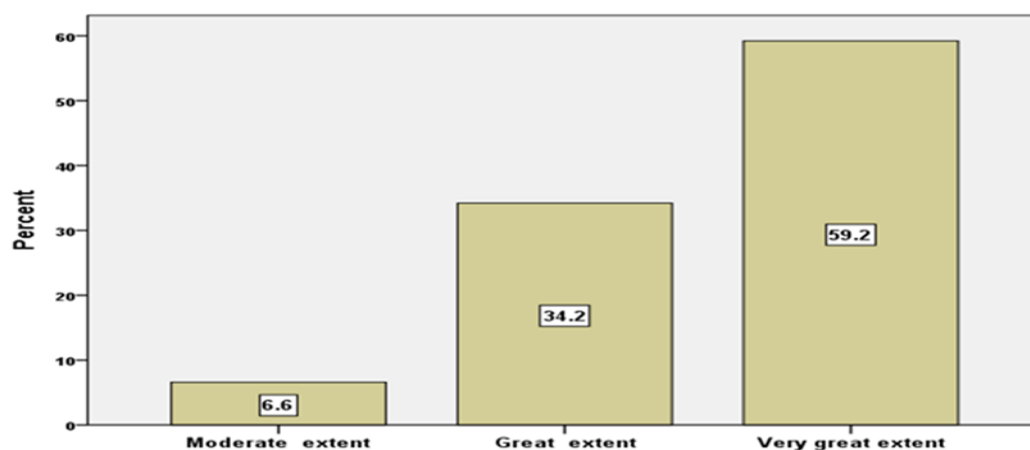


Figure 1.1: Extent to which staffing adequacy influences the implementation of CBC

Source: Research Data (2026)

The findings in Figure 1.1 show how the staffing adequacy influences the implementation of the Competency Based Curriculum. The findings indicate that 6.6% of the respondents stated that it influences to a moderate level; 34.2% stated that it influences to a great level while 59.2% of the respondents opined that it influences to a very great extent. These findings are supported by Ogembo (2024) in a study on “The Implementation of CBC in Public Schools in Kenya: Challenges and Opportunities.” The study concurs that teaching human resource constraints and staffing adequacy is a major challenge hindering effective implementation of CBC. The findings clearly show that majority of the respondents believe the teacher staffing adequacy in a school has a very great significance on the implementation of the Competency Based Curriculum in a school, especially if quality is to be upheld.

Relevance of the Staffing Adequacy on the Implementation of CBC in JSS

The study assessed the relevance of the teacher staffing adequacy on the implementation of Competency Based Curriculum in Junior Secondary School in Mukaa Sub-County. The respondents were asked to indicate the level of agreement on number of thematic questions. The Likert scale was graded as follows: 1-Strongly Disagree (SD); 2-Disagree (D); 3-Neutral (N); 4-Agree (A); 5-Strongly Agree (SA). The responses are captured in Table 4.9 below and are out of sample size of 76.

Table 1.2: Thematic Responses on the Level of Agreement on How Staffing Adequacy Influences the Implementation of CBC in JSS

Statement	SD-1	D-2	N-3	A-4	SA-5	N	Mean	Std. Dev.
Teachers are the most important resource in the implementation of a curriculum	0 (0.0%)	0 (0.0%)	2 (2.6%)	9 (11.8%)	65 (85.5%)	76	4.83	0.444
Teacher shortages influence negatively curriculum implementation	0 (0.0%)	0 (0.0%)	2 (2.6%)	6 (7.9%)	68 (89.5%)	76	4.87	0.411
High teacher-learner ratio impacts negatively on the implementation of CBC	3 (3.9%)	7 (9.2%)	19 (25.0%)	19 (25.0%)	28 (36.8%)	76	3.82	1.151
Teachers have received adequate in-service training on the CBC	0 (0.0%)	14 (18.4%)	16 (21.1%)	22 (28.9%)	24 (31.6%)	76	3.74	1.100
The gender of the teacher has an influence on the implementation of CBC	27 (35.5%)	17 (22.4%)	15 (19.7%)	14 (18.4%)	3 (3.9%)	76	2.33	0.769

Source: Research Data (2026)

The findings from Table 1.2 revealed that teachers were considered the most important resource in CBC implementation, with 85.5% strongly agreeing. Teacher shortages were also identified as a major challenge, with 89.5% strongly agreeing that they negatively affect CBC implementation. A high teacher-learner ratio was similarly viewed as a challenge, while some teachers reported gaps in in-service training, particularly in assessment, project-based learning, ICT integration and support for learners with special needs. Gender was generally not considered to influence CBC implementation. Overall, the findings highlight the need for adequate teacher staffing and continuous professional development.

Correlation between staffing adequacy and the implementation of CBC in JSS

Pearson's correlation analysis showed a strong positive relationship between teacher staffing adequacy and CBC implementation ($r = 0.740$).

Table 1.3 Correlations analysis between staffing adequacy and the implementation of CBC

Variables	Statistic	The Level of Satisfaction with the Implementation of CBC	The Extent to Which Staffing Adequacy Influences the Implementation of CBC
The Level of Satisfaction with the Implementation of CBC	Pearson Correlation	1	.740**
	Sig. (2-tailed)	—	.000
	N	76	76
The Extent to Which Staffing Adequacy Influences the Implementation of CBC	Pearson Correlation	.740**	1
	Sig. (2-tailed)	.000	—
	N	76	76

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



Source: Research Data (2026)

This correlation implies that the teacher staffing adequacy was positively and significantly associated with respondents' satisfaction with CBC implementation in Junior Secondary Schools in Kenya. Therefore, for there to be effective and quality implementation of the curriculum, the government must ensure that there are adequate well-trained teachers in Junior Secondary Schools in Kenya. An interview with the Sub-County Director of Education (SCDE) acknowledged the shortage of teachers in Junior Secondary Schools as captured in the following transcript.

"It is very true that there has been a shortage of teachers in public Junior Secondary Schools but the government is gradually addressing this challenge by employing more teachers each year, some even on contract basis. However, there is an acute shortage of teachers for special skills such as music, home science, foreign languages and other new learning areas."

This admission of the shortage of qualified teachers in some areas clearly shows that the government should employ more teachers to fill this gap so that there is quality and effective implementation of the Competency Based Curriculum in Junior Secondary Schools in Mukaa.

SUMMARY AND CONCLUSION

The study established that teacher staffing adequacy greatly influences the implementation of the Competency Based Curriculum in public Junior Secondary Schools in Mukaa Sub-County. Table 1.1 showed that the sampled schools had an average of 169 learners and five trained teachers, leaving a shortage of about four teachers per school. The average teacher-learner ratio was 1:34. This shortage increased teachers' workload and made it difficult to give learners individual attention, carry out continuous assessment, supervise group activities and support project-based learning. Further findings showed that 59.2% of respondents reported that teacher staffing adequacy influences CBC implementation to a very great extent, while 34.2% indicated a great extent. In addition, 85.5% strongly agreed that teachers are the most important resource in CBC implementation, while 89.5% strongly agreed that teacher shortages negatively affect curriculum delivery. Although teachers had received some in-service training, gaps were reported in assessment, project-based learning, ICT integration and supporting learners with special needs. Gender was not viewed as a major influence on CBC implementation. The study concludes that inadequate teacher staffing is a major challenge to effective CBC implementation in Mukaa Sub-County. The government should therefore provide adequate and qualified teachers and strengthen continuous teacher training to improve curriculum delivery.

RECOMMENDATIONS FOR POLICY

This study makes the following recommendation.

The government should ensure that all public Junior Secondary Schools are adequately staffed with teachers who match the required knowledge and skills in order to reduce cases of teacher shortages especially in the skills-oriented subjects.

RECOMMENDATIONS FOR FURTHER STUDIES

Based on the findings, the study recommends;

A study should be conducted to examine the influence of teacher staffing adequacy on the implementation of Competency Based Curriculum in private Junior Secondary Schools in Mukaa Sub-County.

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