



Influence of Availability of Trained Teachers on Curriculum Implementation in Public Secondary Schools in Garissa Sub-County, Garissa County, Kenya

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Abstract: Teachers play a key role in ensuring improved implementation of the curriculum in secondary schools. However, in Garissa Sub-county, the implementation of the curriculum in secondary schools is still low, with many teachers unable to cover the syllabus on time, which resulted in low performance among students. This research sought to determine the influence of availability of teachers on curriculum implementation in public secondary schools. The study adopted mixed methodology and concurrent triangulation research design. The target population was 318 respondents, which included 12 principals, 304 teachers, and 2 Sub-county Directors of Education (TSC & MoE), from which samples of 6 principals, 170 teachers, and 2 Sub-county Directors of Education (TSC & MoE) were determined using Yamane's Formula. Data was collected through questionnaires for teachers and interview guides for principals and Sub-county Directors of Education. Qualitative data were analyzed thematically and presented in narrative form, while quantitative data were analyzed using descriptive statistics such as frequencies and percentages and inferentially through Pearson's Product Moment Correlation Analysis, using Statistical Package for Social Sciences (SPSS Version 25) and presented in tables. The study found that curriculum implementation has faced numerous challenges with many teachers unable to complete syllabus in time, which has led to low academic performance in KCSE. This has been attributed to the inadequacy of teachers in public secondary schools. Thus, the study recommends that the Ministry of Education should conduct regular recruitment of teachers to attain the required student-teacher ratio.

Keywords: Public, secondary schools, Curriculum, Implementation, Availability of teachers, Kenya

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1. Introduction

Globally, education is considered a key activity aimed at promoting wholistic growth and development of learners and become responsible citizens of their countries. According to United Nations Educational, Scientific and Cultural Organization (2024), education is viewed as the process through which every society intentionally imparts knowledge, skills and values from generation to generation. To achieve this noble role, different countries in the world continually change their education systems and undertake learner-centered curricula reforms to suit

the needs, interests, preferences of learners and to tap on their talents and competencies at any given moment. This has seen many countries across the world effectively implement curriculum as a panacea to education challenges. According to Bennett, Swanson, Schaefer and Falbe (2023), curriculum implementation entails putting into practice the officially prescribed courses of study, syllabuses and subjects. Bennett et al. (2023) opine that it is vital to note that curriculum implementation cannot take place as the learner acquires the planned or intended experiences, knowledge, skills, ideas and attitudes that are aimed at enabling the same learner to function effectively in a society. In other

words, the researchers opine that the implementation of school curriculum entails how the planned or officially designed course of study is translated by teachers into syllabuses, schemes of work and lessons to be delivered to learners. However, curriculum implementation has not been without its fair share of challenges in many secondary schools. For example, a survey by Gedro, Hartman and Suárez (2021) show that, in Haiti, only 34.9% of teachers cover syllabus in time with only 40.8% registering impressive performance in national examinations.

In Guyana, Shaw, Levesque and McKie (2020) posit that 56.8% of teachers have faced disciplinary actions due to the inability to complete their school syllabus in time and in such cases, only 40.1% of students have been able to perform better in their examinations. These reports point to the fact that teachers are crucial in the implementation of curriculum in schools by adopting a stimulating pedagogy. In other words, it is the teaching and learning process that brings the curriculum to life, determines what happens in the classroom and subsequently improves learning outcomes. According to Rasinki, Homan and Biggs (2024), availability of trained teachers, curriculum support materials, physical facilities, parental involvement, undertaking awareness and attitude change among staff and above all, support from school heads. In Finland, World Economic Forum's Global Competitiveness Report (2021) exemplifies the concept of teacher availability is the cornerstone for excellent education system. A report drawn by the Islamia University of Bahawalpur shows that, in Pakistan, before embarking on implementation process for curriculum, school management is tasked to ensure that trained teachers are available and adequate (Javed & Hamid, 2022). These assertions underscore the vitality of teacher availability in the curriculum implementation.

An assessment survey by Musiman, Sutopo, Muhammad, Madya and Alivermana (2020) found that, despite the activities undertaken by management of schools in Indonesia to ensure that teachers are available, close to 59.4% of students rarely cover syllabus in time with students registering low grades in examinations. In many countries in Sub-Saharan Africa, the scenario is the same with curriculum implementation in public secondary schools still facing numerous challenges. For example, an assessment undertaken by Ajibola (2023) revealed that, in Nigeria, curriculum implementation in secondary schools still stands at 39.5% success rates. Ajibola (2023) indicates that many aspects of secondary school curriculum have not been fully realized with 67.3% of the students still registering low grades in examinations. Similar instances are reported in schools in KwaZulu Natal Province in South Africa, where Muraraneza and Ntombifikile (2023) note that curriculum implementation in secondary schools is yet to be fully realized. Muraraneza and Ntombifikile (2023) further assert that, in schools where management has succeeded in providing adequate number of teachers,

there have been remarkable improvement in curriculum implementation. In Kenya, the scenario is the same with curriculum implementation in many public secondary schools still facing many challenges. A report authored by the Ministry of Education (2022), for example, shows that many teachers still find it difficult to complete syllabus in time and consequently, their students register low grades in national examinations. In Garissa Sub-county, curriculum implementation is also quite ineffective with syllabus coverage rates among teachers still low occasioning low performance in national examination. For example, a report by the Ministry of Education (2023) indicates that only 56.8% of teachers complete their syllabus time to accord their students enough time for revision and remedial activities. In such schools, only about 14.9% of students register quality grades (C+ and above) in the Kenya Certificate of Secondary Education (KCSE). This further corroborates a report by the Ministry of Education (2023) which showed that, in the year 2018, Garissa Sub-county had a mean grade of 11.4% in KCSE, 2019 had 11.1%, 2020 had 10.3%, 2021 had 9.8% whereas in 2022, secondary schools registered a mean grade of 7.8%. However, few empirical studies had interrogated the extent to which availability of teachers influences implementation of curriculum in public secondary schools, thus, the study.

1.1 Research Objectives

The study sought to address the following objectives:

1. To assess the status of curriculum implementation in public secondary schools in Garissa Sub-county.
2. To examine the influence of availability of teachers on curriculum implementation in public secondary schools in Garissa Sub-county.

2. Literature Review

Availability of trained teachers plays a pivotal role in successful curriculum implementation in schools. Given such an assertion, Armstrong (2022) opines that professional development and availability of trained teachers help them acquire pre-requisite skills to improve their understanding of different aspects which are necessary for new approaches in classroom pedagogy. This indicates that availability of trained teachers must be prioritized so as to make actual curriculum reforms in schooling. With curriculum changes taking place every five years, Sturgis and Casey (2023) note that teaching and learning approach totally changed the teachers' role from the monopoly of teacher-centeredness to learner-centeredness. Inandi and Gilic (2023) posit that teachers are facilitators who only guide the learning process and therefore, training focused on teacher expertise and specialization is necessary. This implies that a teacher, being the facilitator, must adopt a paradigm in the way

of conceptualizing the child who has innate abilities and nurture them.

To achieve this, Zeiger (2022) posits that teachers must have noteworthy knowledge and skills, capability to interrelate with all children, set good standards and make good choice of instructional materials that are favourable for children at various levels. In a study conducted in Malaysia, Karia and Ahmad (2023) revealed that availability of trained teachers on curriculum implementation skills increase efficiency and competency. In other words, availability of trained teachers can essentially be thought of as a measure of the extent to which the teachers have acquired pre-requisite skills for availability of instructional supervision in school. In the same token, Stoll, Bolam and Collarbone (2021) carried out a study in the Netherlands which found that change requires strategic initiatives to improve availability of trained teachers to hasten curriculum implementation. Stoll et al (2021) revealed that Ministry of Education responded by organizing training courses for teachers for periods ranging between one month, a fortnight or sometimes two months. In Estonia, Leithwood, Day, Sammons, Harris and Hopkins (2023) found that teachers have to follow a special course to become teachers with at least five years of teaching experience being required coupled with training on teaching approaches. Such teachers must manifest sound cognitive, interpersonal, strategic and emotional intelligence skills for effective curriculum implementation. In other words, teachers need to be well-equipped with necessary skills to undertake their instructional activities more effectively to guarantee smooth curriculum implementation in schools. That is, teachers are expected to increase their knowledge as educators and share their knowledge with colleagues. In South Africa, the government has priorities in teachers' training which is centered on the standardization and upgrading of academic qualification, improving administrative experience and providing support. This corroborates that assertions of UNESCO (2024) that training equips teachers with skills necessary to enhance curriculum implementation since, without these skills, many teachers find themselves overwhelmed by the challenging tasks of leadership in schools.

In Rwanda, Rwanda Education Board (REB) (2024) asserts that sharing of best practices, successes and lessons learnt between teachers and principals, is a real way of dealing with problems surrounding the execution of the curriculum approaches. In Kenya, Obuhatsa (2020) notes that availability of trained teachers is regarded as key determinant to successful curriculum implementation in schools and teachers must have in mind the change of responsibilities focused on the relationship built between the curriculum and the pupil during teaching. In a study carried out in Garissa County, Osman (2024) revealed that training of teachers is crucial since it enables teachers to understand both the philosophy behind any curriculum and how the new

programme may impact learners, parents, administrators and other stakeholders. Osman (2024) further found that teachers may find the curriculum introduces content with which they are unfamiliar, which they have not taught in a while or is familiar but presented in an unfamiliar way. The study established that teachers should understand the goals and content of a curriculum document or syllabus well to implement it effectively. However, much still needs to be since Osman (2024) as well as other reviewed studies had not interrogated how specific skills required by teachers influence the curriculum implementation in secondary schools.

2.1 Theoretical Framework

This study was based on the open systems theory which was postulated by Luhmann (2004). The open systems theory is an approach to organizations which liken an organization to an organism with interdependent parts, each with its own specific function and interrelated responsibilities. All parts of the organization are interconnected and interdependent. The school as an organization is an open system, which interacts with the environment and is continually adapting and improving. According to Luhmann (2004), the theory is applicable in a school set up as an organization in that the school as an open system receives input from the environment. This implies that learners from the larger societal environment go to school with a host of their own beliefs, goals and hopes, but become changed individuals as a result of educational experiences in school which are acquired through interaction with the school management and teachers. Luhmann (2004) asserts that the interaction between school managers, teachers and learners as well as other stakeholders also incorporates monitoring activities which are undertaken in schools to ensure that teaching and learning take place in a conducive environment. According to Luhmann (2004), this means that, if the school as an organization is to be effective in the management of schools, it must pay attention to changes in the external environment and take steps to adjust itself to accommodate the changes in order to remain relevant. In the context of this study, some of the changes may include policy changes, policy requirements and legislative requirements that may require appropriate response for effective curriculum implementation which could improve learner competencies. To achieve these objectives, open systems theory underscores the vitality of teachers. Thus, the relevance of Luhmann's (2004) theory in this study is that, in order to realize educational goals of curriculum, the school management must marshal all the resources necessary including the availability of teachers. The study was also anchored on the curriculum implementation theory which was postulated by Bobbit (1918). This theory is anchored on the assumption and belief that any curriculum worth being implemented should prepare learners for their future roles in the new industrial society and thus, influenced school curriculum by showing how teaching classical subjects should be

replaced by teaching subjects that correspond to social needs. According to this theory, a curriculum has to adapt to the needs of an individual and the needs of the new industrial society, people should not be taught what they would never use.

The curriculum being implemented should only teach those skills that were necessary to fulfill their tasks, which resulted in an early differentiation in education for girls and boys. To achieve this, he developed and created five steps for curriculum making. The first step was about separating all of human experience into major fields. This was followed by step two, where the fields were broken into more specific activities. The third step was to form the objective from the abilities needed to perform the activities. Next is the fourth step, where the objectives are selected to find ones that would serve as the basis for planning activities for the learners. The last step was to lay out activities, experiences and opportunities that is needed to obtain the objectives. According to Bobbit (1918), there was a need to eliminate conventional school subjects and examinations, that is, he believed that schools are charged to provide society with what it needs as determined by scientific analyses. In this study, the theory fits in that implementation of curriculum considers learners' strengths, weaknesses, needs and preferences and advocates for change in teaching methods. It taps into learner competencies and mastery of subjects and examinations.

3. Methodology

This study adopted a mixed methodology and applied a concurrent triangulation research design. The target population was 318 respondents, which included 12 principals, 304 teachers, and 2 Sub-county Directors of Education (TSC & MoE), from which a sample of 178 respondents was determined using Yamane's Formula. Stratified sampling was used to create three different strata based on the number of zones in Garissa Sub-county. From each zone, two principals were sampled using purposive sampling. All the Sub-county Directors of Education (TSC & MoE) were also purposively considered for the study. However, from each zone, simple random sampling was applied to select 85 teachers to avoid bias. This sampling procedure resulted in a sample of 6 principals, 170 teachers, and 2 Sub-

county Directors of Education (TSC & MoE). Questionnaires were used to collect quantitative data from teachers, whereas interview guides were used to gather qualitative data from principals and Sub-county Directors of Education (TSC & MoE). Data analysis began by identifying common themes from the respondents' descriptions of their experiences. Qualitative data were analyzed thematically based on the objectives and presented in narrative forms. Quantitative data were analyzed using descriptive statistics such as frequencies and percentages and inferentially using Pearson's Product Moment Correlation Analysis with the help of the Statistical Package for Social Sciences (SPSS Version 25) and were presented using tables. In this study, an ethical clearance certificate was obtained from Mount Kenya Ethical Review Committee (MKU ERC) before embarking on data collection processes. The researcher undertook to keep private any information given by the respondents that touched on their personal life. The researcher assured the respondents that no private information would be divulged to a third party.

The nature and the purpose of the research were explained to the respondents by the researcher. The researcher explained to the respondents the procedure that would be followed during the data collection so that they could participate willingly. The raw data collected were filed for easy reference. Once the data were analyzed, computer printouts were filed while soft copies were stored in the flash disks.

4. Results and Discussion

In this section, findings as per the objectives of the study are outlined besides highlighting presentation of findings as well as discussions.

4.1 Response Rates

In this study, 170 questionnaires were administered to teachers, and, in return, 149 questionnaires were filled and returned. In the same token, the researcher interviewed six (6) principals and 2 Sub-county Directors of Education (TSC & MoE). This yielded response rates shown in Table 1:

Table 1: Response Rates

Respondents	Sampled Respondents	Those Who Participated	Achieved Return Rate (%)
Principals	6	6	100.0
Teachers	170	149	87.6
Sub-county Directors of Education (TSC & MoE)	2	2	100.0
Total	178	157	88.2

Source: Field Data (2025)

Table 1 shows that principals registered a response rate of 100.0%, teachers registered 87.6% whereas the Sub-county Directors of Education (TSC & MoE) registered a 100.0% response rate. This yielded an average response rate of 88.2%, which is consistent with the assertions of Creswell (2018) that a response rate above 75.0% is adequate. This information was important since it allowed the researcher to generalize the study outcomes to the target population.

4.2 Status of Curriculum Implementation in Public Secondary Schools

The study sought to assess the status of curriculum implementation in public secondary schools in Garissa Sub-county. This was measured by assessing how often teachers cover syllabus in time and KCSE performance between 2020 and 2024. Results are shown in Table 2;

Table 2: Frequency of Syllabus Coverage by Teachers in Public Secondary Schools

Frequency of Timely Syllabus Coverage by Teachers	Number of Teachers	
	f	%
Often	52	34.9
Rarely	90	60.4
Never	7	4.7

Source: Field Data (2025)

Table 2 shows that majority of teachers, 90(60.4%), rarely cover syllabus in time, 52(34.9%) often do whereas 7(4.72%) never do. During the interviews, principals also stated that most teachers do not cover syllabus in time. Principal, P1, noted.

In my school, I have had cases where teachers do not cover syllabus in time to accord students adequate time for revision.

These findings corroborate the assertions of Peterson (2022) that a performing or competent teacher is

regarded as one who is able to cover syllabus in time and teach a particular subject very well that is, one who perceives his or her teaching competence and believe that they can exert a positive effect on students' achievement. In the same token, a report authored by the Ministry of Education (2024) indicated that delays in syllabus coverage are most notable during the third term, with many teachers struggling to complete the content before national exams. This trend has been linked to teachers' tendency to focus on exam-centric topics and neglect other essential areas, leading to an incomplete educational experience for students. The researcher further sought to assess the status of performance in KCSE for the last five years (2020-2024) as an indicator of teacher performance. Results are shown Table 3;

Table 3: KCSE Performance in Public Secondary Schools in Garissa Sub-county

KCSE Results in Mean Score	Years of Examination				
	2020 %	2021 %	2022 %	2023 %	2024 %
1-2.9 points (Poor)	45.7	48.5	49.2	50.3	51.9
3-4.9 points (Below Average)	31.4	30.1	29.9	30.5	29.5
5-6.9 points (Fair)	15.4	15.1	14.8	13.7	13.4
7-8.9 points (Good)	5.3	4.4	4.3	3.8	3.6
9-11.9 points (Excellent)	2.2	1.9	1.8	1.7	1.6

Source: Field Data (2025)

Table 3 illustrates that the academic performance of students in the KCSE has been declining over the past five years. These results align with the findings of a MoE (2024) report, which also notes a downward trend in the performance of students in Garissa Sub-county. This raises concerns about the effectiveness of teacher performance and the strategies employed by principals to motivate teachers. In conclusion, these findings highlight that teacher performance involves several key elements, including increased effort to achieve high output, innovation in discovering more effective methods, improved attitudes toward students (viewed as

customers), and overall school performance in terms of syllabus completion and academic achievement.

4.3 Availability of Trained Teachers and Curriculum Implementation in Public Secondary Schools

The study sought to examine availability of trained teachers influences curriculum implementation in public secondary schools. Descriptive data were collected from teachers and results are presented in Table 4:

Table 4: Teachers' Views on the Influence of Availability of Trained Teachers on Curriculum Implementation in Public Secondary Schools

Test Items	Ratings				
	SA %	A %	U %	D %	SD %
In public secondary schools, there are inadequate number of teachers which has made it hard to implement curriculum	51.7	11.3	5.6	5.6	25.8
Public secondary schools have employed more teachers to reduce the student-teacher ratio to quicken curriculum implementation	53.7	14.8	5.6	11.1	14.8
Teachers have too much workload due to teacher shortage in public secondary schools which has made it hard to cover syllabus in time	57.4	9.3	7.4	9.3	16.7
In public secondary schools, provision of trained teachers has hastened curriculum implementation process	48.1	18.5	5.6	9.3	18.5
In public secondary schools, lack of adequate number of trained teachers has led to low academic performance in national examinations	66.7	11.1	3.7	5.6	13.0

Source: Field Data (2025)

Table 4 shows that slightly more than half 77(51.7%) of teachers were in strong agreement with the view that in public secondary schools, there are inadequate number of teachers which has made it hard to implement curriculum with slightly more than a quarter 38(25.8%) strongly disagreeing. This implies that the shortage of teachers in public secondary schools critically undermines effective curriculum delivery, particularly the Competency-Based Curriculum (CBC), which necessitates small class sizes and subject specialization. These findings support the findings of Muchunguh (2025) who found that the Teachers Service Commission (TSC) reports an acute shortfall: between 8,000 and 10,000 teachers exit annually, yet budget constraints limit hiring to approximately 5,000 per year, far below a target of 12,626, leading to an estimated shortage of about 27,000 teachers in secondary schools. Such imbalances severely impede CBC implementation and the 100 percent transition policy from primary to secondary schools. A parliamentary briefing further revealed that as of April 2025, Kenya faces a massive deficit of 98,461 teachers in public schools, with interim measures such as recruiting 20,000 intern teachers and deploying primary-trained teachers to junior secondary roles only partially mitigating the gap (Awich, 2025; Muthoni, 2025). Broader analysis shows that teacher shortages adversely affect curriculum delivery in similar contexts. For instance, in Rwanda, high turnover rates coupled with difficulty replacing teachers lead to declines in learning outcomes and increased instances of teachers handling subjects outside their expertise, undermining curriculum fidelity (Zeitlin, 2020). In Kenya, overloaded classrooms and insufficient subject specialists further strain the practical demands of CBC,

which mandates interactive and personalized instruction (Simiyu, 2025). Additionally, inequitable distribution of staff, where by 2023, Kenya had a national secondary-school teacher shortage of 64,541 despite employing over 124,000 secondary teachers, amplifies gaps in marginalized areas, compromising equity and curriculum effectiveness (Jattani & Ochieng, 2023). Overall, these studies consistently illustrate that inadequate staffing levels in public secondary schools impede effective curriculum implementation, especially new pedagogical models like CBC, thus calling for urgent, equitable, and targeted staffing reforms. In the same token, most of the teachers 80(53.7%) strongly supported the view that, public secondary schools have employed more teachers to reduce the student-teacher ratio to quicken curriculum implementation while 22(14.8%) strongly disagreed. This underscores that schools optimizing their teacher workforce enhance curriculum delivery. These findings support the findings of Abubakari et al., (2025) who found that teacher-based factors, including sufficient staffing, were significant predictors of effective curriculum implementation, alongside adequate monitoring and instructional materials. They implicitly recommend recruiting more teachers to support this process. In South Australia, data released in 2024 by the Australian Curriculum, Assessment and Reporting Authority (ACARA) revealed narrowing student-teacher ratios, public high schools with approximately 13 students per teacher, supported by a new A\$1.3 billion funding agreement aimed at hiring additional teachers and support staff (ACARA, 2025). This initiative is aimed at enhancing learning quality and supporting faster, more effective deployment of curriculum across schools.

A broader meta-analytic study on class-size reduction published in 2023 builds on earlier findings that smaller classes yield improved academic outcomes. Glass and Smith (1978), McLaughlin (2022), and the Tennessee STAR experiment remain influential, but newer systematic reviews confirm that decreased student-teacher ratios lead to modest gains in reading, especially in early grades, and support smoother curriculum delivery (Campbell Systematic Reviews, 2023). Slightly more than half 86(57.4%) of the teachers strongly agreed with the view that, teachers have too much workload due to teacher shortage in public secondary schools which has made it hard to cover syllabus in time with only 25(16.7%) strongly disagreeing. This underscores that teacher shortages significantly increase workload burdens in public secondary schools, often impeding timely syllabus coverage. In Kenya, the Teachers Service Commission (TSC) reported a nationwide shortfall of approximately 98,261 teachers, which has gravely undermined the delivery of the Competency-Based Curriculum and hindered full syllabus coverage (TSC Chair – nation. Africa, 2025). This acute shortage forces existing teachers to handle excessive workloads, many manage up to 40 lessons per week, compared to just 10 for their more experienced colleagues, leading to burnout and compromised instructional quality. Supporting this, a Malindi Sub-county study in Kenya found that heavy teacher workloads negatively affect lesson preparation, utilization of instructional materials, and overall student learning outcomes.

The study revealed a statistically significant correlation between high workload and poor student achievement, indicating that syllabus coverage suffers under these conditions (Ndambo, Maithya & Mwaura, 2021). Further afield, evidence from South Africa illustrates similar patterns. A qualitative case study in two high schools in the Eastern Cape revealed that excessive administrative burdens prevented teachers from completing the syllabus, thereby diminishing learners' academic excellence and metacognitive development (Joe & Mtsi, 2024). These findings consistently illustrate that teacher shortages inflate workloads, stifle lesson planning and delivery, and undermine students' educational outcomes due to incomplete syllabus coverage. Across contexts, the problem is not merely quantitative but also qualitative, teachers' morale and capacity to teach effectively diminish, further exacerbating learning deficits. A fair proportion 72(48.1%) of the teachers strongly agreed with the view that in public secondary schools, provision of trained teachers has hastened curriculum implementation process whereas 28(18.5%) strongly disagreed.

This implies that effective implementation of curriculum reforms in public secondary schools critically depends on the provision of trained and professionally prepared teachers. Recent studies conducted in Kenya offer persuasive evidence. In Tigania Central Sub-county, Manyara et al. (2023) found that management training

programs significantly predicted the successful implementation of a competency-based curriculum (CBC), suggesting that equipping school leadership, including trained teachers, facilitates smoother curriculum transitions. Similarly, Segeera, Ndanu and Wambiya (2024) revealed that just over half of teachers in Nairobi's Starehe Sub-county had received in-service CBC training, and those trained reported higher confidence and readiness to implement the new curriculum. In Kirinyaga County, however, Muchiri et al. (2022) noted that many secondary school teachers lacked the pedagogical preparedness necessary for CBC delivery, emphasizing that insufficient training impedes curriculum uptake. Additionally, in Wajir East Sub-County, Abdinoor and Chui (2024) observed that adequate teacher training, aligned with national standards, was positively correlated with improved school performance, highlighting the role of teacher capacity in fostering effective curriculum implementation. These findings indicate a consistent pattern: trained teachers, through management-oriented leadership training, in-service professional development, or alignment with standardized curriculum expectations, play a pivotal role in accelerating curriculum implementation in public secondary schools. Conversely, where such training is lacking, schools face delays and challenges in adapting to curriculum reforms. The evidence underscores the imperative for educational policymakers to institutionalize regular, targeted teacher training programs to ensure efficient and effective curriculum rollout.

Two-thirds, 99(66.7%), of the teachers strongly agreed with the view that, in public secondary schools, lack of adequate number of trained teachers has led to low academic performance in national examinations while 19(13.0%) strongly disagreed. This implies that teacher shortage remains acute despite a large pool of trained but unemployed educators. The Teachers Service Commission reports a need for over 116,000 teachers, particularly in Junior Secondary Schools for STEM subjects. This deficit impairs syllabus completion and adversely affects national exam results, such as KCSE and KCPE (Top View Solutions, 2025). Empirical evidence from Mandera North Sub-County underscores this link. Schools surveyed had only 5–8 trained teachers, and less than 60% of them possessed formal teaching qualifications. Principals and teachers agreed that the lack of trained staff led to syllabus delays, overloads, and diminished student outcomes (SJ Education Research Africa, 2024). Similarly, in Geita District, Tanzania, head teachers report that teacher shortages elevate stress and hamper their administrative effectiveness. About 73% of respondents noted that insufficient teaching staff directly correlates with poor student performance in national exams. Regional evidence further confirms this trend. These findings affirm that inadequate numbers of trained teachers in public secondary schools hinder effective instructional delivery, disrupt syllabus

coverage, overburden educators, and culminate in low performance on national examinations.

4.3.1 Inferential Analysis

To verify the influence of availability of teachers on curriculum implementation in public secondary schools, data were collected from 6 principals of the sampled public secondary schools on the number of teachers, how often teachers cover syllabus in time and academic performance in KCSE for the year 2024. Results are shown in Table 5:

Table 5: Number of Teachers and Curriculum Implementation in KCSE for the Year 2024

Number of Teachers	How Often Teachers Cover Syllabus in Time	2024 KCSE Results
11	2	2.14
21	3	3.78
43	5	4.81
13	3	2.80
18	2	3.48
60	2	5.89

Source: Field Data (2025)

Table 5 shows that the higher the number of teachers to cater for the increased number of students, the higher the frequency with which teachers cover syllabus in time as well as improved students' academic performance in KCSE. This indicates that the ratio of teachers to students plays a crucial role in the quality of education, particularly in the Kenyan education system and the Kenya Certificate of Secondary Education (KCSE) outcomes. The higher the number of teachers relative to the number of students, the better the chances of syllabus coverage within the stipulated time, ultimately leading to improved academic performance. When there are more teachers to cater to a larger student body, each teacher can spend more time with individual students, addressing their specific learning needs. This individual attention is essential for ensuring that students fully grasp the concepts taught. With more teachers available, students can receive more focused and personalized guidance, improving understanding and retention of material. Additionally, a lower student-teacher ratio allows teachers to maintain a manageable workload, which reduces burnout and improves overall teaching quality. Teachers can devote sufficient time to preparing lesson

plans, grading assignments, and engaging with students, leading to more effective delivery of the syllabus. This means that topics are covered in depth and on time, ensuring that students are well-prepared for their final examinations.

In contrast, when the student-to-teacher ratio is high, teachers may struggle to give adequate attention to each student. This can result in slower syllabus coverage, incomplete understanding, and lower student performance. Teachers might have to rush through lessons, leading to gaps in learning and unpreparedness for exams. Thus, increasing the number of teachers to meet the growing student population enhances the overall educational experience, ensuring that students are better equipped for the KCSE exams. A well-covered syllabus, combined with personalized instruction, leads to improved academic performance, highlighting the importance of investing in teacher recruitment to cater to growing student numbers. The data in Table 5 were run through Pearson's Product Moment Correlation Test Analysis. The results are presented in Table 6:

Table 6: Relationship between Availability of Teachers and Curriculum Implementation in Public Secondary Schools

		X	A	B
X	Pearson Correlation	1	.545*	.509*
	Sig. (2-tailed)		.041	.023
	N	6	6	6
A	Pearson Correlation	.545*	1	.767
	Sig. (2-tailed)	.024		.087
	N	6	6	6
B	Pearson Correlation	.509*	.767	1
	Sig. (2-tailed)	.023	.087	
	N	6	6	6

*. Correlation is significant at the 0.05 level (2-tailed).

Key: **X**- Number of Teachers; **A**- How Often Teachers Cover Syllabus in Time and **B**-2024 KCSE Results

Table 6 shows that there is a strong correlation between availability of teachers and curriculum implementation in public secondary schools. That is, the higher the number of teachers, the higher frequency with which teachers cover syllabus in time and improved students' academic performance in KCSE ($r(6) = 0.545$ and 0.509 at $p = 0.041, 0.023$ at $\alpha = 0.05$). This indicates that a well-structured curriculum is only as successful as the resources available to support its delivery, and teachers are the primary resource in this regard. Adequate staffing ensures that the curriculum is delivered in a structured, consistent, and effective manner. Without enough teachers, students often face overcrowded classrooms, diminished individual attention, and a lack of timely instruction, all of which hinder their understanding of the material and their academic performance. Research indicates that schools with higher teacher-to-student ratios experience better curriculum delivery outcomes. When teachers are available in sufficient numbers, they can focus on differentiating instruction to meet the needs of diverse learners.

Furthermore, teacher availability enables schools to offer a broader range of subjects and extracurricular activities, giving students a more comprehensive education and better preparation for future academic and career pursuits. On the other hand, teacher shortages result in curriculum modifications, where certain subjects might be underrepresented or taught by inadequately qualified staff. In such environments, schools often resort to "teaching to the test" or reduce the scope of the curriculum to fit the limitations of available teaching staff. These shortcuts compromise the educational quality and limit students' learning experiences. A sufficient number of qualified teachers is essential for fostering a learning environment that supports comprehensive education and addresses the diverse needs of students. Therefore, ensuring teacher availability should be a key focus for educational policymakers to improve overall educational outcomes.

4.3.2 Thematic Analysis

During the interviews, the principals also responded in favour of the view that the number of teachers is key to improving curriculum implementation in public secondary schools. Principal, P2, stated;

In my school, the number of teachers is not adequate which has made curriculum implementation difficult.

Similar views were expressed by the Sub-county Directors of Education expressed similar views by stating that the number of teachers is still low. From these mixed findings, shortage of qualified teachers in public secondary schools has significantly hindered the pace of curriculum implementation, impacting the quality of education and the future of students. The teacher shortage has become a widespread issue due to various factors, including low teacher salaries, lack of proper

training, and limited resources for professional development. In many cases, understaffed schools struggle to offer a comprehensive and balanced curriculum, especially in critical subjects such as mathematics, science, and foreign languages. The absence of sufficient teachers forces schools to either extend class sizes or ask existing teachers to take on more subjects, leading to burnout and a reduced ability to provide personalized attention to students. This not only affects the quality of instruction but also results in a lack of consistency in curriculum delivery, with some subjects being inadequately covered or skipped altogether. Additionally, students are left with fewer opportunities for practical learning, which is essential for their development. Moreover, the absence of well-trained teachers means that the latest pedagogical techniques and up-to-date resources are often not utilized, leading to outdated teaching practices. This gap in teacher capacity hampers the full implementation of innovative and dynamic curricula, which are designed to meet the evolving needs of students and prepare them for the demands of the modern workforce. These mixed findings affirm the fact that the inadequate number of teachers in public secondary schools is a significant obstacle to effective curriculum implementation.

5. Conclusion and Recommendations

5.1 Conclusion

Curriculum implementation in public secondary schools has faced numerous challenges with many teachers unable to cover syllabus in time which has led to low academic performance of students in the Kenya Certificate of Secondary Education (KCSE). This is attributed to the inadequate number of teachers. In other words, many public secondary schools have experienced shortage of teachers. With fewer teachers available, educators often struggle to cover all aspects of the curriculum within the allotted time frame.

5.2 Recommendations

1. As a practice, the Ministry of Education should conduct regular recruitment of teachers to attain the required student-teacher ratio for quality education in public secondary schools.
2. As a policy, the Ministry of Education should formulate a policy which allows school management to partners with key stakeholders to provide adequate number of teachers to smoothen the process of curriculum implementation.

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