SUPPORT SYSTEM ON CURRICULUM IMPLEMENTATION IN PUBLIC SECONDARY SCHOOLS IN NAVAKHOLO SUB COUNTY, KENYA

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DECLARATION AND APPROVAL

Declaration by the candidate

This project is my original work and has not been, presented for a degree in any other University or for any other award.

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Approval by Supervisor

This project is being submitted for examination with my approval as University supervisor.

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DEDICATION

To Ken-my friend,husband and buttress.And Jesse,my son- the world of Robotics awaits you! I hope this journey inspires you.

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ABSTRACT

Effective curriculum implementation is essential for achieving educational goals and improving student learning outcomes. However, challenges related to limited resources, professional development opportunities, and pedagogical support often hinder teachers' ability to implement the curriculum effectively. School Based Teacher Support System aims at providing training in subject matter as well as pedagogical content knowledge and support to teachers; especially the Science, Mathematics and English teachers. The purpose of this study was to establish support system on curriculum implementation in public secondary schools in Navakholo Sub County. Specifically, the study sought to: establish the influence of lesson study on curriculum implementation; determine the influence of peer lesson observation on curriculum implementation; investigate the influence of virtual groups on curriculum implementation and to assess the influence of use of ICT integration in lesson delivery on curriculum implementation in public secondary schools in Navakholo Sub County. The research followed the principles of Organizational Learning Theory and utilized a descriptive survey research design. The total population targeted for this study consisted of 10,545 participants alongside a sample size of 200 respondents were selected using the Probability Proportional to Size formula (PPS). A pilot study was carried out by the researcher in two Mumias East Sub County schools. Pilot research was carried out at a few Mumias East Sub County public secondary through piloting, the investigator was able to assess the validity and dependability of the study tools. Various data collection methods, including questionnaires, observation, focus group discussions, and interview schedules, were employed. After the data was gathered, descriptive statistics like means, frequencies, and percentages was employed to analyse the information. In addition, the use of linear regression analysis was employed to determine the associations involving the dependent and independent variables, as well as evaluating the degree of these associations. Pie charts, graphs, along with tables were utilized for illustrating the findings.The results of the Regression analysis showed that lesson study accounted for 62% of curriculum implementation variance, highlighting its importance in fostering teacher collaboration and consistent curriculum application. Peer lesson observation explained 57.8% of the variation, promoting professional dialogue and shared strategies but facing challenges like scheduling conflicts. Virtual groups accounted for 61.8% of the variance, enhancing curriculum delivery through collaboration and resource sharing, though internet issues posed challenges. ICT integration explained 60.8% of the variation, improving curriculum delivery through engaging lessons, but faced barriers such as unequal access to technology and teacher proficiency. The study concludes that all four factors significantly impact curriculum implementation and recommends targeted professional development, formalized peer observations, improved internet infrastructure, and regular ICT assessments to address challenges and optimize curriculum delivery.

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LIST OF ABBREVIATIONS AND ACRONYM

CBC : Competency-Based Curriculum

CBE : Competency - Based Education

CBET : Competency - Based Education and Training

CEMASTEA : Centre of Mathematics science and Technology Education in Africa

ICT : Information Communication and Technology

KNUT : Kenya National Union of Teachers

KICD : Kenya Institute of Curriculum Development

MOEST : Ministry of Education Science and Technology

SBTSS : School Based Teacher Support System

SEQUIP : Secondary Education Quality Improvement Project

SPSS : Statistical Package for Social Science

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This section provides an outline of the research background to the study, the statement of the problem, outlines the study's purpose and its objectives, poses research questions, explains the study's significance, specifies its scope, limitations, defines delimitations, articulates assumptions, and provides explanations for operational terms.

1.2 Background to the study

Curriculum implementation, as highlighted by Rizalie (2022), is a pivotal factor in shaping the future of students and holds significant importance in determining the quality and effectiveness of education. However, ensuring successful implementation of the curriculum is not always an easy task. It requires supportive environment, adequate resources, and skilled personnel. One crucial factor that can influence the success of curriculum implementation is teacher support. In this context, school-based teacher support systems have emerged as a popular approach to improve teacher effectiveness, which, in turn, can lead to better student outcomes.

Ball (2021) conducted an extensive study over an extended period in California, USA. The research revealed that discussions concerning the readiness of the majority of Californian schools have predominantly revolved around the proportion of teachers without credentials or, in the case of middle and high school educators, those lacking the appropriate single-subject credential for their assigned subjects. Ball (2021) illustrated that the primary schools in the state of California have not received adequate attention in terms of the provision of teachers, educational resources, physical infrastructure, and stakeholders' perspectives on the implementation of the state's primary school curriculum. The British educational system has always been dedicated to giving its pupils a top-notch education. The vital role that educators play in ensuring that curriculum is successfully

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implemented and, ultimately, in influencing students' educational achievements has come into more focus in recent years. As such, the establishment of a robust and effective School-Based Teacher Support System (SBTSS) has emerged as a significant area of focus for policymakers, educators, and researchers.

The complexity of the educational landscape, along with the diverse needs of students, presents challenges for teachers in effectively delivering the curriculum. Curriculum implementation requires teachers to adapt instructional approaches, provide differentiated instruction, and address the individual needs of learners. However, many teachers face considerable barriers, such as lack of resources, time constraints, and inadequate professional development opportunities. Research carried out by Smith et al.,(2019) highlighted that in public secondary schools across Britain, teachers expressed a need for comprehensive support systems to enhance curriculum implementation. The study emphasized that an effective SBTSS could improve teacher morale, increase instructional effectiveness, and ultimately improve student achievement.

Most Sub-Saharan African research that attempts to evaluate teachers' proficiency in a certain subject area has concentrated on teacher perceptions of their own preparedness through interviews, without comparing school-related factors with students' academic results (Amarel, 2021). However, studies on factors related to schools and teacher effectiveness have shown that self-assessments of preparedness are correlated with behaviours that impact student learning, such as a readiness to experiment with different teaching strategies, tenacity in problem-solving, levels of organization and planning. Since apartheid ended, South Africa's education system has experienced substantial changes with an emphasis on enhancing all students' admittance to high-quality schooling.

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Nevertheless, in secondary public schools, there are still issues with properly executing the curriculum and giving instructors enough assistance. In reaction to these difficulties, educators and policymakers have realized how important it is for a School-Based Teacher Support System (SBTSS) to improve curriculum implementation and student learning outcomes.

The analysis made clear that there were frequently difficulties with curriculum implementation due to limited teacher training and support. Teachers expressed a desire for more personalized professional development and mentoring to address the specific needs of their students. The presence of an effective SBTSS showed several benefits for teachers and students in South African public secondary schools. Teachers who received ongoing support reported higher levels of job satisfaction and professional growth (Makgato & Ramorola, 2021). As teachers developed their instructional skills, students experienced improved learning experiences and academic performance (Chabalala & Mokoena, 2020).

All of Somalia's official educational systems collapsed along with the country's educational infrastructure in 1991, following the fall of the Somali state. Currently, the nation lacks a unified educational system since the education sector is backed by a number of entities, such as regional administrations, global nongovernmental organizations, community education committees, religion groups, the commercial sector, and umbrella organizations and networks in education. Despite the fact that most countries have implemented preventative measures, the pandemic's threat has escalated to a dangerously high level globally and is continuously growing. Nevertheless, research by Kruijer (2020) shows that a large number of educators lack adequate knowledge about how to mentor their pupils. These educators frequently deal with packed classrooms, underfunded institutions without the necessary infrastructure, low pay, and unfavourable working conditions. Taken together, these issues not only have a detrimental impact on teachers' status and motivation, but they also eventually seriously compromise the standard of instruction given (Kruijer, 2020).

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Teacher availability also has an impact on curriculum implementation (Kruijer, 2020). There are severe shortages in important courses like science, math, and English, and there has not been a balanced allocation of secondary school teachers.

Regional imbalances persist in teacher distribution, and with the expected increase in secondary school enrolments due to the rapid expansion of the primary subsector, there is a corresponding demand for additional instructors. The curriculum implementers in the classroom are, the teachers. A lack of this component has a detrimental effect on how the curriculum is implemented. There is inequity in the new decentralized teacher recruitment policy. Regardless of the number of schools or pupils enrolled in a school, every constituency receives the same treatment and allocation of slots. Head teachers and school boards oversee secondary schools. The Ministry of Education (2021) states that establishing a policy on curriculum implementation in schools is necessary in order to improve the management abilities of principals and B.O.G. members.

Numerous socioeconomic variables impact how the curriculum is implemented in schools, according to research done by the Kenya National Examination Council - National Assessment System for Monitoring Learner Achievement (KNEC-NASIMLA, 2021). These variables encompass, among other things, teacher preparation; accessibility to instruction; educational resources; scheduling; classroom procedures; and head teacher attributes. This study sought to explore support system on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya.

1.3 Statement of the Problem

Effective curriculum implementation in public secondary schools relies heavily on a robust School-Based Teacher Support System (SBTSS), which enables teachers to access tailored professional development, fosters collaboration, and equips them with innovative instructional methods. Such support enhances teachers' instructional capabilities and ultimately improves student learning

outcomes (Mugo & Muthaa, 2021). Studies such as Kitari (2020) underscore the critical role of teacher education and the importance of a structured school-based support network for optimal curriculum delivery. However, public secondary schools in Navakholo Sub-County, Kakamega County, continue to struggle with persistent challenges in implementing the curriculum effectively. A primary issue in Navakholo is the limited professional growth opportunities for teachers, which hinders their ability to adapt teaching strategies to address diverse student needs. The absence of a structured SBTSS exacerbates these difficulties, leading to sub-optimal curriculum delivery. The Ministry of Education (MoE, 2023) highlights that insufficient teacher support systems in underperforming sub-counties such as Navakholo significantly impede academic achievement. This gap is further emphasized in government reports that detail the sub-county's low performance in national exams, partly attributing it to the lack of an established support system for teacher development (MoE, 2023).

Despite widespread recognition of the value of teacher education, existing studies (e.g., Kitari, 2020) reveal a continued lack of emphasis on school-based support networks, which contributes to the ongoing difficulties in curriculum implementation. The inadequate SBTSS in Navakholo's public secondary schools presents a substantial barrier to effective curriculum delivery, impacting both teaching quality and student performance. Addressing this gap and strengthening professional development opportunities for teachers is essential for enhancing curriculum implementation and improving student academic outcomes in the sub-county. Therefore, this study sought to examine the support system on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya, to identify ways to bridge this critical gap and foster improved educational outcomes.

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1.4 Purpose of the study

The aim of the study was to establish support system on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya.

1.5 Objectives of the study

The study was guided by the following specific objectives

1. To establish the influence of lesson study on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya
2. To determine the influence of peer lesson observations on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya
3. To investigate the influence of virtual groups on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya
4. To assess the influence of use of ICT integration in lesson on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya

1.6 Research Questions

This study was channeled using the following research questions:

1. What is the influence of lesson study on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya?
2. How does peer observations influence on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya?
3. What is the influence of virtual groups on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya?
4. How does the use of ICT integration in lessons influence on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya?

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1.7 Significance of the Study

The findings of this investigation would, helpful to a variety of stakeholders, including administrators, teachers, and boards of management. Parents would also gain awareness about curriculum implementation in public secondary schools and school-based teacher support systems. The study's conclusions and suggestions would assist national policymakers in developing new guidelines for the use of school-based teacher support systems for the application of curriculum in secondary public schools. The study's conclusions would contribute to our understanding of how curriculum implementation in Navakholo Sub County's public secondary schools is impacted by school-based teacher support systems. It would also act as a foundation for future study by other scholars.

1.8 Scope of the Study

The study was limited to Public secondary schools in Navakholo Sub County. The respondents to be utilized in the study were 36 Principals, and 10,509 teachers of Science, Mathematics and English. The study was confine itself to school based teacher support system on curriculum implementation in public secondary schools in Navakholo sub county for a period of four months from July, to October, 2024.

1.9 Limitation of the study

Given that the research is dependent upon the respondents' cooperation might be a limitation because some people could be reluctant to provide information for private reasons. The validity of the data obtained may be impacted by replies that may have been given due to incorrect question interpretation by the respondents. The researcher plans to employ well designed data gathering tools to minimize this and eliminate any uncertainty. Additionally, the goal of the study was made evident both orally and in the introduction section of each questionnaire to reassure participants that their answers will only be used for the study.

1.10 Delimitations

The investigation was conducted in Public Secondary schools in Navakholo Sub County, Kakamega Kenya to the exclusion of private schools. This is due to the fact that public schools offer a regulated setting concerning the calibre of pupils, the quantity and calibre of instructors, and the instructional effort (KIE, 2024). Additionally, as they have been trained in implementing school-based support, only instructors of science, math, and English were part in the study. Since the principals are in charge of overseeing the curriculum at their respective schools, they are also included. As students are the primary focus of any curriculum, they were part of this research, which specifically explores the School Based Teacher Support System in Public Secondary Schools in Navakholo Sub County, Kenya. The findings would not be generalizable to other regions, even though there could be additional factors influencing curriculum implementation.

1.11 Assumptions of the study

The researcher operated under the following assumptions;

i. The study's participants was voluntarily take part and provide accurate answers.
ii. The schools have maintained current documentation of their in-school teacher assistance program.
iii. Participants should be familiar with the curriculum implementation support system introduced in public secondary schools in Navakholo Sub County through school-based methods.

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1.12 Operational Definition of Key Terms

Curriculum implementation: Denotes how educators transform the formally designed curriculum into syllabi, work plans and instructional lessons for students.

ICT integration: Refers toward diverse sets of technological tools used to transmit information

Lesson study: This type of inquiry takes place in the classroom when many instructors work together to organize, instruct, monitor, edit, and present the findings of a lesson.

Lesson observation: This method involves watching a class to evaluate the quality of instruction and make sure students are learning as much as possible.

School based teacher support system. This is a system that aims at providing training in subject matter as well as pedagogical content knowledge and support to Science, Mathematics and English teachers. It consists of interrelated and interdependent sources of teacher support when conducting duties at school level.

Virtual groups: These are computer applications or software that offers teachers a virtual mode of learning and enhancing their experiences. The platforms include WhatsApp, Google Apps, Facebook, Twitter, Google classroom among others.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a literature review organized into the following sub-sections: concept of curriculum, empirical review, theoretical literature, conceptual framework, research gaps and a summary of literature review.

2.2 Concept of Curriculum Implementation in Schools

Based on examined studies, the Egyptians, Greeks, and Romans possessed advanced ideas about infancy, dating back to ancient times, contributing to the historical roots of curriculum implementation. Aristotle and Plato deliberated on the necessity of educating young children, while ancient Romans initiated teaching when their children began speaking. International and Kenyan research, particularly by Githinji and Kanga (2021), indicates that curriculum implementation involves executing officially approved topics, syllabuses, and courses of study, aiming to assist learners in acquiring experience and knowledge. It is crucial to emphasize that learners play a vital role in curriculum execution.

The planned experiences, information, skills, concepts, and attitudes designed for learners to excel in society are implemented as they assimilate these elements. Viewed from this perspective, "curriculum implementation" encompasses the phase where the curriculum operates as an instructional program. Tanner et al. (2020) posits that an implementing agent, typically the teacher, is essential for executing the curriculum. The teacher's role in curriculum implementation involves selecting and integrating diverse knowledge areas found in a syllabus or curriculum paper. Implementation occurs as students engage with the syllabus, teacher, learning resources, and the learning environment. Hence, curriculum implementation delineates how teachers translate an officially defined course of study into syllabuses, work plans, and lessons taught to students

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2.3 Empirical Review

According to the objectives, an empirical review of the variables under investigation is given in the next subsection.

2.3.1 Lesson Study and Curriculum Implementation in Schools

Globally, In the USA, the adoption of lesson study is driven by the need to improve instructional practices and student learning outcomes, particularly in STEM subjects. The National Council of Teachers of Mathematics (NCTM) has been a key advocate of the lesson study model. Research has shown that lesson study enhances teachers' understanding of curriculum standards and improves their ability to deliver these standards effectively in the classroom. Teachers collaborate to develop research lessons aligned with the curriculum, reflecting on student learning and adjusting their instructional strategies accordingly. This has led to better alignment between teaching practices and curriculum goals, particularly in states that prioritize educational reform (Lewis & Hurd, 2021).

China's educational system is highly structured, and the implementation of lesson study plays a critical role in refining curriculum delivery. Chinese teachers have long embraced this practice, with the Ministry of Education promoting lesson study as part of continuous professional development. In Chinese secondary schools, lesson study has enhanced the quality of curriculum implementation by fostering collective teacher learning and experimentation with new teaching strategies. Teachers are encouraged to focus on problem-solving and critical thinking skills, which align with national curriculum reforms aimed at cultivating innovation among students. This collaborative model has proven effective in improving teachers' understanding of subject matter and pedagogy, which in turn enhances student engagement and academic performance (Xu & Clarke, 2022).

In Germany, lesson study has been incorporated into teacher education programs as a means of bridging the gap between theoretical knowledge and classroom practice. While the German education system is decentralized, various Länder (states) have adopted lesson study to improve the delivery of the curriculum in secondary schools. Lesson study supports teachers in adapting the curriculum to the diverse needs of students, especially in subjects like mathematics and science, where student performance is a key concern. The collaborative nature of lesson study enables teachers to reflect on the effectiveness of different instructional methods and make informed changes to their teaching practices, thus ensuring that the curriculum is implemented in a way that promotes deeper student understanding (Ufer & Leuders, 20230).

In South Africa, lesson study has been introduced as part of ongoing efforts to address the challenges faced by the education system, particularly in mathematics and science. Many schools have adopted lesson study to improve curriculum implementation in these critical subjects. The model encourages teachers to work collaboratively, share best practices, and align lessons with the South African curriculum standards. Research has shown that lesson study helps South African teachers deepen their understanding of subject content, which in turn improves their ability to implement the curriculum effectively (Ono & Ferreira, 2020). As teachers refine their instructional techniques, student engagement and performance in subjects like mathematics have shown improvement.

In Nigeria, the education sector is grappling with issues such as large class sizes, inadequate teacher training, and varying levels of curriculum implementation. The introduction of lesson study in some secondary schools has been a response to these challenges, providing a structured way for teachers to collaborate and improve lesson delivery. Studies indicate that teachers who engage in lesson study are better able to align their lessons with Nigeria's curriculum and meet the diverse

learning needs of students (Adedeji, 2021). The collaborative planning and reflection process inherent in lesson study has also been beneficial in addressing gaps in teaching, particularly in core subjects like English and mathematics.

Uganda has increasingly focused on improving the quality of education by enhancing teacher professional development. Lesson study has been piloted in some schools as part of this initiative, with a focus on improving curriculum implementation in secondary education. Teachers in Uganda use the lesson study approach to develop lessons that are more aligned with the national curriculum and tailored to the specific learning needs of their students. Research suggests that lesson study has helped teachers in Uganda to better understand the curriculum and improve instructional practices, particularly in subjects like science and mathematics (Nakabugo, 2023). This approach promotes active learning, encouraging students to engage more deeply with the content.

Kenya has made strides in incorporating lesson study into its education system, particularly in secondary schools. Supported by organizations such as the Kenya Institute of Curriculum Development (KICD), lesson study has been used to address issues of teacher preparedness and curriculum implementation. Teachers work in groups to plan, observe, and refine lessons, ensuring they are aligned with Kenya's competency-based curriculum. Studies have shown that lesson study has enhanced teachers' abilities to interpret and implement the curriculum effectively, leading to improved student learning outcomes, especially in subjects like mathematics and science (Muriithi & Itegi, 2021). The collaborative nature of lesson study allows teachers to continuously improve their instructional methods based on student feedback and learning progress.

The process of putting into effect the curriculum content created by legislators is known as curriculum implementation. The proficiency of the instructor, the resources at hand, and the instructional techniques used can all have an impact on how well the curriculum is implemented. Lesson study is one of the tactics that has become more and more popular in recent years. A type

of classroom inquiry known as "lesson study" involves many instructors working together to jointly design, teach, observe, revise, and discuss the outcomes of a lesson. The practice of lesson study, which dates back to the 19th century in Japan, has become popular in many nations, including Kenya and the US.

To create, deliver, assess, and evaluate a single lesson, a group of educators collaborate. Improving student learning, curricular implementation, and teaching effectiveness are the main objectives of the lesson study (Lai, Lee, and Chien, 2021). It has been determined that lesson study is an effective instrument for teacher professional development, which boosts the execution of the curriculum. Lesson study is an instructor-driven professional development technique that includes cooperative preparation, observation, and reflection, according to Hadi (2021). Lesson study, according to the study, assisted instructors in identifying their areas of strength and weakness, which enhanced their use of the curriculum and pedagogical techniques. The study also found that lesson study increased student learning outcomes by fostering a culture of cooperation and ongoing professional growth among instructors.

Teachers in Tanzania claimed that lesson study improved their professional development and curriculum implementation in research by Kikwasi and Kasyanju (2021) on the influence of lesson study on teacher professional development. Lesson study, according to the study, assisted instructors in identifying areas for development, which enhanced their pedagogical abilities and curriculum implementation. Lesson study, according to the study, has strengthened teacher cooperation and collaboration by giving instructors a forum to share their expertise and experiences. Implementing the curriculum has been demonstrated to benefit from lesson study as well. Teachers stated that lesson study had increased their grasp of the curriculum material and their capacity to apply the curriculum successfully in research by Onguko and Sifuna (2020) on the impact of lesson study on the application of curricula in Kenya.

According to this study, lesson study assisted instructors in identifying areas in which they were lacking in their comprehension of the curriculum, which resulted in better execution of the curriculum. Additionally, the study found that lesson study gave educators a forum to exchange ideas and information, which enhanced their efficacy and the learning results of their students. Similarly, teachers claimed that lesson study had improved their capacity to carry out the curriculum in an efficient manner in research conducted by Kimani and Wambugu (2021) on the effects of lesson study on curriculum implementation in Kenya. According to the study, lesson study assisted instructors in determining their areas of strength and weakness in terms of curriculum implementation, which resulted in better curriculum implementation.

The study also found that lesson study boosted teacher effectiveness and student learning outcomes by fostering a culture of cooperation and ongoing professional development among educators. It has also been discovered that lesson study gives teachers more control over their instruction, which enhances curriculum implementation through better teaching strategies and classroom management. Lesson study, in the opinion of Ongowo and Mbugua (2021), encourages a culture of inquiry, teamwork, and continual improvement, giving instructors the confidence towards being responsible for their own practice and professional development. Lesson study, according to the study, assisted instructors in determining their areas of strength and weakness, which enhanced their use of the curriculum and their teaching methods. Additionally, the study found that lesson study fostered a climate of trust and cooperation among educators, which enhanced teacher autonomy and increased student learning results.

According to instructors in a Bwire and Wambua (2021) study on lesson study's influence on teacher empowerment in Kenya, lesson study has improved their professionalism, self-assurance, and capacity to carry out the curriculum in an efficient manner. According to the study, lesson study enhanced instructors' pedagogical abilities and helped them get a deeper grasp of the

curriculum's subject matter, which improved the way the curriculum was implemented. Lesson study, according to the study, gave instructors a forum to exchange experiences and expertise, which enhanced teacher empowerment and increased student learning results. It has also been discovered that lesson study improves student learning results. Lesson study, in the opinion of Kariuki and Githua (2021), encourages teacher cooperation, reflective practice and the exchange of best practices, all of which enhance instruction and student learning.

According to the study, lesson study improved students' academic performance, motivation, and involvement. Lesson study fostered a culture of continual improvement among instructors, which enhanced student learning results, according to the research. Similarly, instructors indicated that lesson study improved student accomplishment in a Wangila et al. (2021) study on the effect of lesson study on student learning outcomes in Kenya. Lesson study, according to the study, increased student learning outcomes by assisting instructors in identifying and modifying successful teaching strategies for their specific teaching situations. The study also found that lesson study increased student learning outcomes by fostering a culture of cooperation and ongoing professional development among instructors.

The impact of virtual communities in the context of SBTSS is not sufficiently explored in this study. Scholars like Rheingold (2019) point to a lack of knowledge on how instructors implementing curricula might benefit from online platforms in terms of collaborative behaviours, resource sharing, and professional development. The researchers agree with educators who actively engage in online communities as places of support. According to Rheingold's (2019) research, educators participating in curriculum implementation can communicate ideas, resources, and support with one another using these online platforms.

However, there are notable gaps in the research, one key gap is the lack of empirical studies that examine the specific impact of lesson study in rural and semi-rural settings like Navakholo. Most

of the research on lesson study in Kenya has been concentrated in urban schools, where resources and structured teacher development programs are more readily available. This urban focus leaves a significant gap in understanding how lesson study operates in schools with fewer resources and less access to professional development opportunities (Kariuki, 2019; Odongo, 2021). Exploring this dynamic could shed light on how rural teachers adapt lesson study to fit their unique circumstances.

Another gap in the literature concerns the particular challenges faced by teachers in Navakholo Sub-County, such as large class sizes, limited teaching materials, and a rural socio-economic environment. While lesson study is designed to improve teaching through collaborative reflection, the impact of these rural-specific challenges on the implementation of lesson study remains largely unexamined. Teachers in Navakholo may face difficulties in dedicating time to collaborative sessions due to their heavy workloads and the geographic isolation of schools (Mutua & Ochieng, 2020). The study seeks to address these research gaps in enhancing curriculum implementation in Navakholo Sub-County. It would also help tailor teacher development initiatives to meet the unique needs and challenges of rural schools in the region.

2.3.2 Peer Lesson Observation and Curriculum Implementation in Schools

In the USA, peer observation has been integrated into teacher development programs to improve instructional quality and curriculum implementation. Schools encourage teachers to observe one another's lessons, especially in high-stakes subjects like mathematics, science, and English. Research shows that peer observations help teachers reflect on their teaching practices and ensure that they are effectively delivering the curriculum. By providing constructive feedback, teachers are able to align their methods with state and national standards, enhancing both curriculum fidelity and student outcomes (Darling-Hammond & Richardson, 2019). Additionally, peer observation fosters a collaborative school culture that supports continuous improvement in curriculum delivery.

Australia has incorporated peer observation into its teacher professional development frameworks, particularly to support the implementation of the Australian Curriculum.

Teachers are encouraged to engage in classroom observations to identify areas where instructional practices can be improved to meet curriculum goals. Studies suggest that peer observation has a positive impact on teachers' ability to deliver the curriculum effectively, particularly in literacy and numeracy programs (Lofthouse & Wright, 2022). The process also promotes a culture of collaboration, allowing teachers to share best practices and develop more effective teaching strategies, thereby ensuring that the curriculum is implemented with greater consistency across different schools and regions.

In Japan, peer observation is a long-established practice deeply embedded in the country's education system, particularly through lesson study. Japanese teachers frequently observe each other's lessons as part of a structured process to improve instructional techniques and curriculum delivery. Peer observation in Japan fosters collaboration and reflective practice, helping teachers align their lessons with the national curriculum and continually refine their teaching methods (Takahashi & Yoshida, 2024). This practice has been instrumental in maintaining Japan's high educational standards and ensuring consistent curriculum implementation across schools.

In Ghana, peer observation is gaining recognition as a tool for improving the quality of teaching and curriculum implementation in public secondary schools. Teachers in Ghana use peer observation as a means of enhancing their understanding of curriculum requirements and refining their instructional techniques. The practice has been especially useful in subjects like mathematics, where teachers collaborate to improve their delivery of the curriculum (Anamuah-Mensah, 2021). Peer observation allows teachers to share feedback and insights that help align their lessons more closely with national curriculum standards, leading to improved student performance and a more cohesive teaching approach across schools.

Tanzania has also adopted peer observation as part of its broader educational reforms aimed at improving curriculum implementation. Teachers in public secondary schools are encouraged to observe their peers, particularly in subjects where curriculum alignment has been challenging. Research shows that peer observation has helped Tanzanian teachers to better understand curriculum standards and identify areas where they need to adjust their teaching practices (Sumra & Katabaro, 2024). The collaborative nature of peer observations fosters a sense of accountability and continuous improvement, which ultimately enhances the delivery of the curriculum and ensures that students receive a more consistent education.

In Kenya, peer observation has been introduced as part of efforts to improve the implementation of the competency-based curriculum (CBC). Teachers in public secondary schools are encouraged to participate in peer observations as a way to reflect on and improve their instructional practices. Studies show that teachers who engage in peer observation are better able to align their lessons with the curriculum, particularly in subjects like science and mathematics (Wachira & Njuguna, 2021). Through feedback and reflection, teachers are able to refine their teaching methods, making the curriculum more accessible and relevant to students. This has contributed to improved student learning outcomes and a more standardized approach to curriculum delivery across schools.

In Kakamega, Kenya, peer observation has been increasingly adopted as a strategy to enhance curriculum implementation in public secondary schools. Teachers in this region use peer observation to share feedback and improve their instructional methods, particularly in subjects where curriculum alignment has been challenging, such as mathematics and science. Studies suggest that peer observation helps teachers in Kakamega refine their lessons to meet the standards of the competency-based curriculum, improving both teaching practices and student performance (Ochieng, 2020). This collaborative approach has been crucial in ensuring that the curriculum is delivered effectively and consistently across the region.

Implementing the curriculum is a crucial part of the educational process, and how well it works hinges on a number of variables, as the efficacy of the teachers, resources available and the instructional tactics that are used. Peer lesson observation has been a prominent method in recent years. Teachers observe one another's teaching techniques and give one other comments as part of a collaborative process called peer observation. Peer observation aims to improve student learning outcomes, foster teacher inquiry and cooperation, and increase the efficacy of instruction. Different approaches may be used for peer observation, such as lesson study, co-teaching, and classroom observation with feedback (Kumsa, 2020).

Peer observation is frequently seen as a type of collaborative teacher inquiry, in which educators examine their own teaching methods methodically and thoughtfully. Teachers watch one other's lessons and give comments on how they are teaching as part of a professional development technique called peer observation. Peer observation's main objective is to increase teachers' efficacy in the classroom by giving them constructive criticism, encouraging introspection, and enabling them to share best practices with other educators where peer observation is observed in a school setting (Grossman, 2021). Curriculum implementation may be significantly impacted by attitudes about teaching and learning. The way that teachers teach, how engaged their students are in the lesson, and the results of the teaching process can all be impacted by their attitudes regarding the curriculum, teaching, and learning processes. Efficient curriculum implementation and enhanced student learning outcomes can result from positive attitudes about instruction and education. Instructor’s attitude towards teaching and learning can be positively impacted by peer lesson observation, which can result in better curricular implementation. Teachers indicated that peer observation had improved their attitudes toward teaching and learning in a Simatwa (2021) study on the effect of peer lesson observation on teachers' attitudes in Kenyan secondary schools with regard to instruction and learning.

The study also discovered that peer lesson observation improved teacher inquiry and cooperation, which improved comprehension of the curriculum and the processes of teaching and learning. Educators expressed that peer observation enhanced their understanding of curriculum content and the teaching and learning procedures, as reported in a study conducted by Okendo (2021) examining the impact of peer observation on curriculum implementation in Kenyan secondary schools. Peer observation improved teacher cooperation and inquiry, which improved curriculum implementation, according to the study. Peer lesson observation enhances student participation and communication while also improving teaching methods and teacher preparedness.

Peer observation improved teachers' attitudes toward teaching and learning, according to teachers in research by Njenga and Njoroge (2021) on the effect of peer lesson observation on teachers' attitudes towards education and instruction in high schools within the Kenyan context. Based on the study, instructors felt more confident about their ability to teach because of the enhanced knowledge and skills they had gained via peer observation. Peer observation has given instructors a forum to discuss their issues and experiences, which has enhanced their cooperation and teamwork, according to the study. In a similar vein, instructors in Mwaiseghe's (2020) study on the influence of peer observation on their attitudes about teaching and learning in Tanzania stated that peer observation had enhanced their views.

According to the study, peer observation raised teachers' motivation and boosted their dedication to their careers as teachers. Peer observation contributed to the formation of a culture of ongoing professional growth, which enhanced teachers, according to the study. Teachers in a Kinyua (2021) research on the effect of peer observation on curriculum implementation in Kenyan secondary schools stated that peer observation had improved their educational attainment and curriculum implementation. According to the study, peer observation contributed to teachers' increased

comprehension of the curriculum's subject matter, which in turn led to better curriculum execution. Peer observation has given instructors a forum to exchange ideas and insights, which has enhanced their cooperation and teamwork, according to the study.

Comparably, instructors in a Kipkemoi (2021) research on the effect of peer observation on curriculum implementation in Kenyan secondary schools stated that peer lesson observation had improved their degree of instruction and curriculum integration. According to the study, peer observation enhanced teachers' expertise and knowledge, which enhanced the way the curriculum was implemented. The research also observed that teacher effectiveness and student learning outcomes, as well as curriculum implementation, had increased as a result of peer observation's creation of a professional development culture among educators. A professional development tactic called peer lesson observation can improve the way the curriculum is implemented in Navakholo Sub County's public secondary schools.

Through peer observation, teachers may improve their methods for imparting knowledge and skills, which will improve student learning outcomes and how the curriculum is applied. Peer observation, which also helps teachers get a deeper understanding of the material covered in the curriculum and the methods used to teach and learn, can lead to effective curriculum implementation. Peer observation may, in general, improve the way curricula are implemented, which will improve student learning results. When it comes to the effect of peer lesson observation on curriculum implementation, previous studies frequently lacked a subject-specific emphasis (Smith and Johnson, 2017). There are research gaps in our knowledge of the ways in which subject-specific observations like those in science, math, and English-influence teaching strategies and student performance.

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Research that probes extensively into instructors' viewpoints is lacking, despite the fact that many studies look at the effects of peer lesson observation from an institutional perspective. Studies specifically related to the local context of Navakholo Sub County are frequently underrepresented in the research currently available on the effects of school-based teacher support systems. There is a deficiency of locally specific research that can shed light on the particular difficulties and possibilities that educators in this area confront. Peer lesson observation should thus be a continual process that promotes continuous growth through constructive feedback rather than a one-time event, rendering to the study, which advocates for the establishment of such processes through school-based teacher support networks.

However, there remain several gaps, while peer observations have been widely adopted in urban schools as a tool for professional growth and curriculum improvement, there is a lack of empirical studies focused on how this practice is implemented and sustained in rural schools like those in Navakholo. Most research tends to focus on schools with better access to resources and structured peer observation programs, leaving a gap in understanding how rural schools with limited resources and professional support systems engage in peer observation practices (Mwangi, 2020; Kariuki, 2021). Additionally, the unique challenges faced by teachers in rural contexts, such as limited access to ongoing training, geographic isolation, and the heavy workload often associated with large classes, present specific obstacles to the effective implementation of peer observations. There is a gap in understanding how teachers in Navakholo navigate these challenges while engaging in peer observation activities and whether these activities significantly influence curriculum implementation in these contexts (Mutua & Ochieng, 2020). Addressing these research gaps would provide valuable understandings into how peer observations influence curriculum implementation in Navakholo Sub-County, helping to develop strategies that are context-specific and tailored to the needs of rural schools.

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2.3.3 Virtual Groups and Curriculum Implementation in Schools

According to Malamud, (2021), in England, virtual groups have been integrated into professional development initiatives to support teachers in implementing the national curriculum. Platforms like Google Classroom, Microsoft Teams, and Edmodo are frequently used by teachers to share resources and collaborate on lesson plans. Studies indicate that virtual groups have helped teachers in England to implement curriculum reforms more effectively by providing access to real-time discussions and resources that enhance their instructional methods (Bennett & Bartholomew, 2021).

Teachers use these platforms to discuss curriculum challenges and align their practices with national standards, which has been particularly valuable during periods of educational reform.

In Russia, virtual groups have become an important tool for connecting teachers across vast distances, particularly in remote areas. Russian educators use platforms like Moodle and WhatsApp to collaborate on curriculum planning and share best practices. Virtual groups have been instrumental in supporting the implementation of new curriculum standards, especially in subjects like mathematics and science (Kozlova, 2018). By connecting teachers who might otherwise have limited opportunities for collaboration, virtual groups in Russia foster a more consistent approach to curriculum implementation across the country.

Angola, with its ongoing educational reforms, has seen the growing use of virtual groups to support teachers in implementing the curriculum. Teachers in Angola often face challenges related to infrastructure and resources, making virtual groups a critical tool for professional development. Platforms like Zoom, Telegram, and Google Meet are being used by teachers to exchange ideas and resources, which has enhanced their ability to implement the national curriculum (Mendes, 2021). The collaborative nature of virtual groups helps teachers overcome isolation and ensures that they stay updated with curriculum changes and teaching methodologies.

In South Africa, virtual groups have played a significant role in addressing disparities in teacher development, especially in rural areas. Teachers use virtual platforms to collaborate on lesson planning, discuss curriculum challenges, and share strategies for effective teaching. The use of virtual groups has been especially prominent in subjects like mathematics and science, where teachers often need additional support to meet curriculum demands (Jansen, 2020). These groups have improved curriculum implementation by fostering ongoing professional dialogue and enabling teachers to access a wider range of resources.

In Uganda, virtual groups have been integrated into teacher professional development programs to improve curriculum implementation, particularly in rural schools. Platforms such as Google Meet and WhatsApp enable teachers to connect with colleagues, share best practices, and receive feedback on lesson plans. Research suggests that virtual groups have helped Ugandan teachers to align their teaching with the national curriculum, particularly in subjects like science and social studies (Nakabugo & Bisaso, 2020). By providing ongoing support and fostering collaboration, virtual groups have contributed to more effective curriculum implementation across the country.

Tanzania has increasingly embraced virtual groups as a way to support teachers in implementing the competency-based curriculum (CBC). Teachers in public secondary schools use platforms like WhatsApp, Zoom, and Moodle to collaborate on lesson planning and curriculum delivery. Virtual groups have been especially useful in providing continuous professional development and supporting teachers in remote areas (Sumra & Rajani, 2021). The collaboration enabled by these platforms has led to improved curriculum implementation, particularly in subjects that require specialized knowledge, such as science and technology.

In Kenya, virtual groups have gained traction as an important tool for supporting the implementation of the competency-based curriculum (CBC). Teachers use platforms like WhatsApp, Google Classroom, and Microsoft Teams to collaborate on curriculum planning, share

resources, and discuss teaching strategies. Studies show that virtual groups have enabled Kenyan teachers to better align their lessons with the new curriculum standards, particularly in core subjects like mathematics and English (Ochieng, 2022). The flexibility and accessibility of virtual groups have made them an effective solution for enhancing curriculum implementation, particularly in under-resourced schools

The COVID-19 epidemic affected people everywhere and the education industry, leading to nearly total closures of colleges, universities, and postsecondary educational establishments. Around 1.8 billion pupils were impacted as of April 26, 2020, as a result of school closures in response to the epidemic. Approximately 98% of all learners worldwide were impacted by the 189 states that had seen national closures and the 5 that had experienced local closures, according to UNESCO's monitoring. To ensure that students' rights to an education were upheld in the wake of the abrupt closure of tertiary institutions, educators, principals, and teachers had to come up with alternatives to in-person instruction. An unprecedented number of systems have embraced online teaching and learning, sometimes in conjunction with widely used distant learning resources like radio or television.

Virtual groups have gained popularity among instructors in public secondary schools as a way to collaborate and further their professional development since the invention of technology. Teachers that work together virtually to share materials, discuss ideas, and give each other feedback are referred to as virtual groups. Ngure et al. (2020) claim that virtual groups give educators a forum to share materials, brainstorm, and work together to prepare lessons, which improves the way curricula are implemented. According to the study, virtual groups helped teachers foster a culture of cooperation and shared accountability, which enhanced their instructional strategies and the learning results of their students. Regular interactions among teachers help them learn how to teach

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more effectively. It has also been discovered that virtual groups give educators chances for professional growth, which enhances the execution of curricula.

Virtual groups give instructors a platform to participate in online training programs and access professional development materials, which improves teaching techniques and curriculum implementation, claim Wambugu and Kariuki (2020). According to the study, virtual groups helped instructors cultivate a culture of ongoing professional development, which enhanced teacher autonomy and increased student learning results. It has also been discovered that virtual groups help teachers, which improves the way the curriculum is implemented. Kanyingi et al. (2021) claim that virtual groups give educators a forum to ask for help and advice from their colleagues, which improves instructional strategies and curriculum execution. According to the study, virtual groups helped teachers foster a culture of mentoring and support, which enhanced their confidence and the academic performance of their students.

Some teachers may find it difficult to employ technology in virtual groups if they are unfamiliar with online platforms. Ondimu and Miriti (2020) claim that certain instructors in Kenya's public secondary schools might not have access to dependable technology or the internet, which could make it difficult for them to participate in online communities. According to the report, schools should give instructors the tools and instruction they need to engage in online groups productively. Another issue that might prevent virtual groups from being more successful in enhancing curriculum implementation is motivation. Some instructors could not be motivated to join in virtual groups if they don't receive rewards or credit for their work, claim Mwango and Wangui (2021). According to the report, educators who actively participate in online forums should get rewards from their institutions, such as professional development credits or recognition.

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The influence of virtual learning communities on teachers' professional development in Tanzanian public secondary schools is what Khamis and Mohamed (2016) found. According to the study, virtual learning communities gave educators the chance to work together, exchange materials, and take part in professional development activities, which enhanced their ability to execute curricula and improve teaching techniques. Njogu's (2021) study, which examined the use of virtual communities of practice to improve curriculum implementation in Kenya's public secondary schools, similarly found that these communities gave teachers a forum for collaboration, resource sharing, and professional development activities, all of which improved instructional strategies and curriculum implementation. It is necessary to use online learning during emergencies, but it has also inspired researchers, decision-makers, citizens, educators, and students to look for other alternatives.

The idea of online learning is being replaced by emergency remote instruction, which is defined as "a short-term shift of teaching methods to a switch method of delivery due to crisis circumstances." This has caused a psychological impact on students as they must adjust to new norms and deal with their fear of using new technology for education. Large faculty resource investments, including time, money, and space, are necessary for the implementation, adoption, and usage of remote learning and associated technology. These expenditures must be approved by the leadership and governance of postsecondary institutions (Ruiz, Mintzer and Leipzig, 2016). Thus, students use remote learning as an innovation in their learning process. Learning processes are defined as those actions that try to figure out how to help students learn in classrooms and workplaces. Students really engage in learning activities as part of their studies. "While processes include lectures, additional reading, group discussions, demonstrations, questions and answers pertaining to prior learning experiences, videos, movies, research initiatives, and interactive websites and

presentations, it also incorporates overviews, preliminary reading, listening to discussions, presentations, websites, and video clips.

Practical projects, idea exchanges with instructors and peers, project assignments, supervised experiences, role playing, skill labs, and writing are other components of learning processes. Receiving constructive and constructive criticism from oneself, classmates, instructors, co-workers, family, and friends is also necessary. After that, one should think, make necessary adjustments, and try again. Contemplation, writing, journaling, and conversation can all help achieve this (Hughes 2021). Many studies ignore the difficulties instructors have using virtual platforms because of their low level of technological expertise (Jones and Brown, 2019). There are still unanswered questions about how well-prepared Navakholo Sub County teachers are for virtual communities and how this proficiency-or lack thereof-affects the way curricula are implemented. As a result, this study emphasizes the value of inclusive technology training as a component of any virtual support system and advocates for programs that guarantee teachers have the skills needed to both access and effectively use virtual platforms.

Although many studies have addressed the role of virtual groups in enhancing collaboration among students and teachers, less emphasis has been placed on teacher preparedness for facilitating virtual learning. In Navakholo Sub-County, where professional development opportunities may be limited, it remains unclear how well teachers are equipped to incorporate virtual group work into their pedagogy. Investigating how teacher training influences the successful integration of virtual groups in curriculum implementation can fill this gap (Odhiambo & Simiyu, 2021).

Existing research tends to focus on the logistical and technical aspects of virtual groups rather than their direct impact on curriculum delivery and student learning outcomes. There is a gap in understanding how virtual group interactions affect students' comprehension of course material, particularly in under-resourced schools where face-to-face interaction may be more common.

Research could explore whether virtual groups enhance or hinder students' grasp of critical content in various subjects (Mukasa, 2022).

2.3.4 ICT and Curriculum Implementation in Schools

According to Tzavara,(2023), ICT integration allows teachers to employ diverse instructional strategies that align with modern pedagogical approaches. Tools such as digital whiteboards, educational software, and online resources offer teachers flexible and creative ways to deliver lessons that meet curriculum standards. By using ICT, teachers can access up-to-date materials and design interactive lessons that cater to various learning styles. Research indicates that teachers who effectively integrate ICT are better able to implement the curriculum in a manner that is both engaging and aligned with learning objectives (Voogt & Knezek, 2023). This ultimately enhances their capacity to deliver the content comprehensively and efficiently.

One of the key influences of ICT integration on curriculum implementation is its ability to improve student engagement and motivation. ICT tools such as multimedia presentations, simulations, and interactive quizzes make learning more dynamic and interesting for students. This fosters a deeper understanding of the curriculum content, as students are more likely to stay engaged and participate actively in the learning process (Selwyn, 2021). By making lessons more interactive and student-centered, ICT helps teachers implement the curriculum in a way that resonates with modern learners, particularly in subjects that may otherwise be considered difficult or abstract.

ICT integration provides teachers and students with access to a wide array of resources that support curriculum implementation. Digital libraries, online academic journals, educational websites, and open-source textbooks enable teachers to supplement their lessons with diverse materials. These resources help in covering all aspects of the curriculum, particularly in subjects that require up-to-date information, such as science and technology. For students, ICT offers the opportunity to engage in self-directed learning by accessing online resources that reinforce what they have learned

in class (Kozma, 2020). This expanded access to resources enhances the depth and breadth of curriculum implementation.

ICT integration allows teachers to differentiate their instruction to meet the needs of diverse learners. With the help of educational software and adaptive learning technologies, teachers can provide personalized learning experiences that align with the curriculum and cater to students with different abilities and learning preferences. This is particularly important in inclusive classrooms, where students may require different levels of support. ICT tools facilitate differentiated instruction by enabling teachers to offer individualized feedback, create customized learning paths, and monitor student progress more effectively (Roblyer & Doering, 2024). As a result, curriculum implementation becomes more inclusive and accessible to all learners.

While ICT integration offers numerous benefits, several challenges may hinder its effective use in curriculum implementation. Inadequate infrastructure, lack of access to reliable internet, and insufficient training for teachers are common obstacles in many public secondary schools, particularly in developing countries. These challenges can limit the extent to which ICT is integrated into lessons, thereby affecting the overall implementation of the curriculum. Additionally, some teachers may resist using ICT due to unfamiliarity or fear of technology, further complicating the process (Ertmer, 2020). Addressing these challenges through investment in infrastructure, professional development, and support systems is essential to maximizing the potential of ICT in curriculum implementation.

The influence of ICT integration on curriculum implementation is reflected in improved learning outcomes. Studies have shown that students in ICT-enriched environments tend to perform better academically, particularly in subjects that benefit from technology-driven teaching methods, such as mathematics and science (Higgins, 2022). By facilitating a deeper understanding of the curriculum, providing access to real-time information, and promoting collaborative learning, ICT

helps students achieve higher levels of academic success. When used effectively, ICT integration aligns closely with curriculum goals, ensuring that learning objectives are met and that students acquire the necessary knowledge and skills.

Globally, the landscape of education is being significantly shaped by information and communication technology (ICT). Kenyan government expenditures have been substantial in building ICT infrastructure, which includes providing public schools with computers and internet access. But it's important to evaluate how these investments are affecting the way the curriculum is implemented in Navakholo Sub County's public secondary schools. The influence of information and communication technology (ICT) on the execution of the curriculum in government-funded secondary schools is examined in this literature review, with particular attention paid to the attitudes and views of educators and learners. Research has demonstrated that a key factor in affecting the success of curriculum implementation is teachers' attitudes and views toward ICT use. Teachers in Kenya have a good attitude toward using ICT in the classroom, with the majority of them agreeing that technology may improve teaching and learning, according to research by Mutahi and Inyega (2021).

Nonetheless, the research also revealed that educators encounter obstacles when attempting to include ICT into their instructional strategies, such as inadequate ICT proficiency and restricted availability of ICT resources. At a similar vein, instructors at Kenya's public secondary schools saw ICT as a useful instrument for raising student achievement, according to research conducted in 2020 by Owino and Wambua. The study did discover, however, that instructors encounter difficulties in efficiently utilizing ICT, such as restricted access to ICT infrastructure, insufficient training, and a lack of administrative assistance. Determining how ICT affects curriculum implementation also heavily depends on how students view and feel about using it. Students in Kenyan public secondary schools have a good attitude toward the usage of ICT within the

classroom, corresponding to research by Wanyama (2021), with the majority of students agreeing that ICT may improve their learning experience. The study did discover, however, that students encounter difficulties in properly utilizing ICT, such as restricted access to ICT infrastructure, insufficient training, and a lack of teacher assistance.

Ngumbau and Miriti (2021) discovered in another study that ICT is seen as a useful tool by Kenyan public secondary school students for enhancing their educational experience. Additionally, the study discovered that students with favourable attitudes about ICT use in the classroom were more likely to have access to ICT infrastructure. Research has demonstrated that integrating ICT into the classroom can improve the way curricula are implemented. Mtebe and Raphael's (2021) study revealed that the incorporation of ICT in mathematics instruction in Tanzanian high schools resulted in enhanced learning results for students. Similar findings were made by Ololube et al. (2021), who discovered that using ICT to teach science in secondary schools in Nigeria increased student success.

Additionally, research by Chepchirchir et al. (2021) discovered that increased student enthusiasm and engagement resulted from the usage of ICT in social studies instruction in Kenyan secondary schools. Additionally, the study discovered that ICT use gave students the chance to cooperate and exchange ideas, which improved their learning outcomes. Onyango and Odundo (2015) conducted a study investigating the effect of information and communication technology (ICT) on the execution of the curriculum in secondary schools in Kenya. According to the study, using ICT in the classroom can boost both teacher effectiveness and student accomplishment. Nonetheless, the research also recognized obstacles to the successful use of ICT in the classroom, including insufficient ICT infrastructure, restricted technological accessibility, and insufficient teacher training.

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Kigamba and Orodho (2021) discovered in another study that better student accomplishment and teacher effectiveness resulted from using ICT in science and math classes in Kenyan secondary schools. The study also discovered that instructors were more inclined to include ICT into their lesson plans if they had access to ICT infrastructure and received training in its use. Additionally, Chepkonga and Chepng'eno's (2020) study looked into how ICT is used in secondary English education in Kenya. According to the study, using ICT resources like computers, projectors, and the internet can boost English language learners' motivation, engagement, and performance. But the survey also discovered that instructors had trouble utilizing ICT successfully since they had little access to it and received insufficient training.

In follow-up research, Kaino and Khasandi (2021) investigated how ICT affected the way the social studies curricula were introduced in Kenyan secondary schools. Students' interest and engagement were observed to increase with the usage of ICT resources such interactive media, photographs, and videos. ICT-enabled instructors also said that it improved their ability to communicate abstract ideas to students and encouraged greater engagement from them. The study did note, however, that several key obstacles to the successful integration of ICT in the classroom include poor teacher preparation, restricted access to ICT tools, and a lack of infrastructure. ICT influence on curriculum implementation in Kenyan secondary schools, with a concentration on biology, was also investigated in research by Munyao and Orodho (2021).

According to the study, students' knowledge and interest in biology enhanced when ICT tools including simulations, multimedia materials, and animations were used. Nonetheless, the research also revealed that educator’s encountered obstacles such limited availability of ICT resources, insufficient instruction, and insufficient backing from educational leaders. The literature currently in publication does not thoroughly examine the range of effects that ICT integration has on different curricular disciplines (Doe and Johnson, 2018). Understanding how ICT affects the implementation

of certain topics like science, math, and English in public secondary schools in Navakholo Sub County is lacking in the studies. Consequently, the studies emphasize the value of community involvement in tackling ICT infrastructure issues and holds that doing so may help create long-lasting solutions by encouraging a feeling of community ownership and dedication to enhancing ICT resources in schools.

One of the most significant gaps in research on ICT integration in Navakholo Sub-County is the availability and accessibility of technological infrastructure. While studies have explored ICT use in well-resourced schools, research is lacking on how under-resourced schools in rural areas like Navakholo are managing to integrate ICT. There is limited data on the extent to which schools in these regions have access to reliable internet, electricity, and sufficient digital devices, which are critical for the successful implementation of ICT in lessons (Okoth, 2020).

Teacher Competence and ICT Proficiency: Although ICT integration in education is increasingly emphasized, there is a gap in understanding how well teachers in Navakholo Sub-County are trained and prepared to use ICT tools in their lessons. Research indicates that teacher competency plays a vital role in determining how effectively technology can be used for curriculum delivery, yet little is known about the specific training needs and challenges faced by teachers in rural areas. More studies are needed to assess the levels of digital literacy among teachers and how it affects their ability to integrate ICT in the classroom (Ndung'u & Mugo, 2021).

2.4 Theoretical framework

This study was directed by organization learning theory introduced by Peter Senge, in his influential 1990 book, The Fifth Discipline: The Art and Practice of the Learning Organization, a renowned organizational theorist. He introduced the concept of "learning organization." He argues that a learning organization fosters continuous learning among its members, encourages collaboration, and values innovation. In the context of schools, Senge's ideas emphasize the need

for a supportive environment that promotes professional development and collaboration among teachers, leading to effective curriculum implementation. Organizational learning theory emphasizes the importance of creating a supportive and collaborative environment within educational institutions. This theory recognizes that effective curriculum implementation requires more than just the dissemination of knowledge; it necessitates a school-based teacher support system that enables teachers to acquire new skills, share knowledge, and continuously improve their instructional practices.

The study investigates how organizational learning theory may be used to comprehend how a teacher support system affects curriculum implementation in public secondary schools in Kakamega County. Establishing a cooperative alongside encouraging atmosphere in schools is crucial, according to organizational learning theory, which is applied to the impact of a school-based teacher support system on curriculum implementation. Proponents of this theory, such as Peter Senge, Michael Fullan, and Andy Hargreaves, argue that a strong teacher support system can lead to improved instructional practices, enhanced curriculum alignment, increased teacher morale, and sustainable professional development.

Effective Implementation of Education Reforms: Kenya, like many other countries, has undergone educational reforms towards improving the quality of education. Nevertheless, the ability of educators to comprehend besides incorporating these modifications into their teaching methods is necessary for the successful execution of these reforms. By giving teachers ongoing assistance, resources, and training, a school-based teacher support system may be extremely helpful in helping them comprehend and apply these changes.

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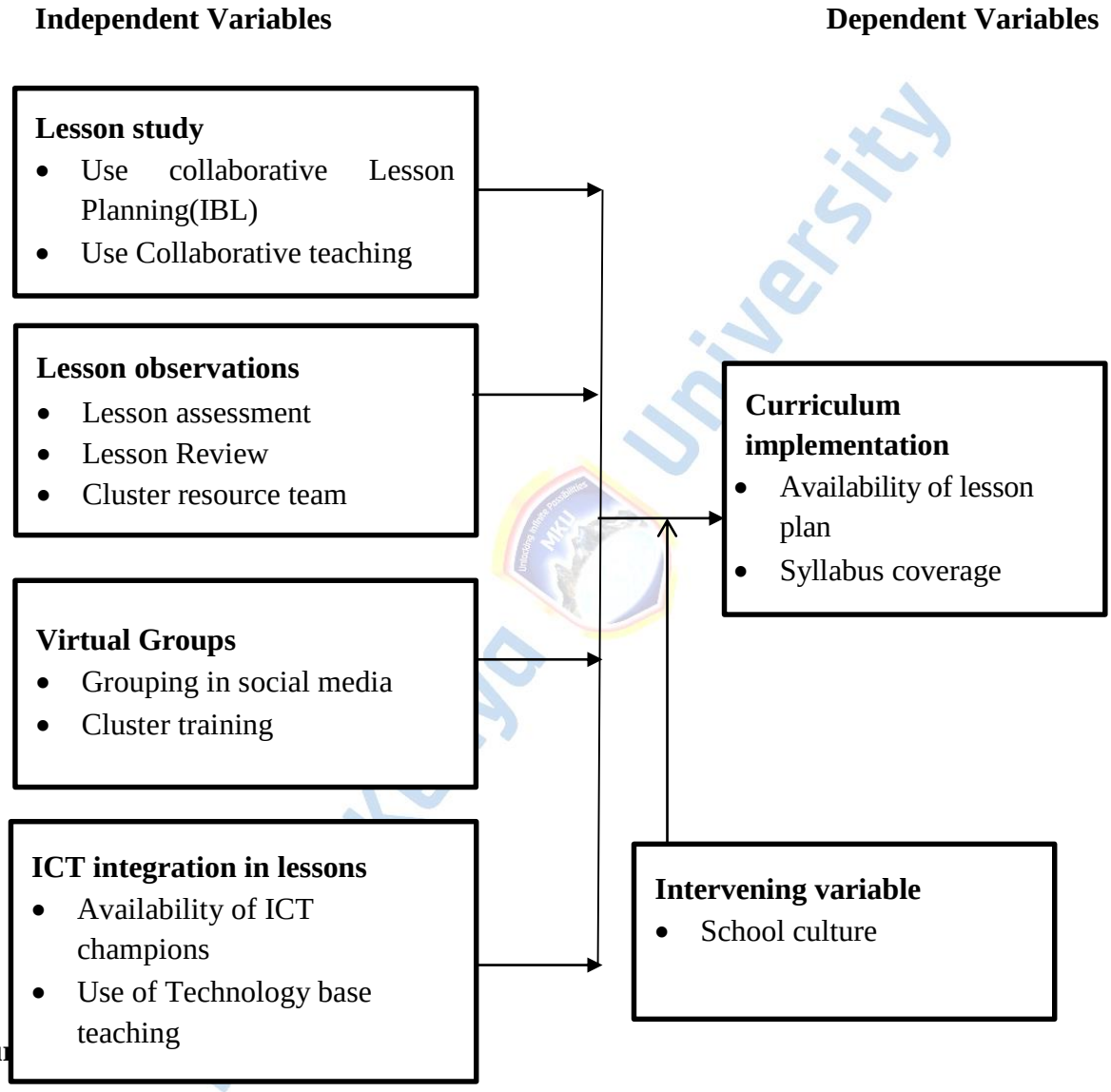
2.5 Conceptual Framework

As indicated in Figure 1, the study employed a conceptual framework in which curriculum implementation is the dependent variable and school-based teacher support systems are enumerated as independent factors.



Figu

Source: Researcher (2024)

The conceptual framework outlined in Figure 1 above establishes a clear relationship between school-based teacher support systems, which are the independent variables, and curriculum implementation, which is the dependent variable. In this framework, curriculum implementation is directly influenced by various forms of teacher support provided within the school environment.

These teacher support systems play a critical role in shaping how effectively the curriculum is delivered in the classroom.

The independent variables represent different types of support available to teachers, including professional development programs, peer coaching and mentoring, provision of teaching resources, administrative support, and collaborative lesson planning. Each of these elements has a distinct influence on how well teachers can deliver the curriculum.

For instance, professional development programs offer teachers opportunities to enhance their skills and keep up with the latest pedagogical approaches, which in turn improves their ability to deliver lessons more effectively. Peer coaching and mentoring provide a platform for experienced teachers to guide their colleagues, fostering a culture of continuous learning and improvement within the school. The availability of teaching resources, such as instructional materials and digital tools, directly affects the teacher's ability to engage students and deliver content efficiently.

Furthermore, administrative support is crucial in creating a conducive teaching and learning environment. When school leadership provides strong backing and facilitates a supportive culture, teachers are better motivated and empowered to focus on their instructional roles. Finally, collaborative lesson planning allows teachers to share ideas and develop instructional strategies together, leading to more thoughtful and well-structured lessons, ultimately benefiting the students.

Therefore, the conceptual framework suggests that curriculum implementation in public secondary schools is heavily dependent on the quality of support systems in place for teachers. The independent variables—school-based teacher support systems—serve as the foundation for effective teaching, while the dependent variable—curriculum implementation—reflects the outcomes of these supports. Thus, improvements in teacher support mechanisms are expected to lead to enhanced curriculum delivery and better learning outcomes.

2.6 Research Gap

Research on the impact of School-Based Teacher Support Systems (SBTSS) in Navakholo Sub County, Kenya, reveals gaps in the existing literature. While Onguko and Sifuna (2020) explored the influence of lesson study on curriculum implementation, there is a need for comprehensive investigations into other SBTSS components like peer lesson observation, mentoring, and virtual communities. Similarly, Njogu (2021) study emphasized the importance of virtual communities in teacher collaboration but overlooked other components like lesson study and peer lesson observation. Mutunga et al., (2019) focused on teacher training workshops but did not delve into the sustained nature of support provided to teachers.

Kimani and Mwiria (2018) concentrated on mentoring programs, leaving a research gap in understanding how mentoring, alongside other support components, contributes to effective curriculum implementation. Additionally, Wamalwa et al., (2022) exploration of peer lesson observation lacked an examination of its alignment with other support elements and its influence on curriculum implementation and student performance. These gaps highlight the need for integrated studies considering the collective impact of various SBTSS components on teachers' professional development and their implications for student learning outcomes. Addressing these gaps would provide valuable insights into designing comprehensive support systems for improved curriculum implementation in Navakholo Sub County.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter begins by outlining the research framework, which encompasses the research design, study location, target population and sampling methodology. It then details the data collection tools, procedures, data analysis and ethical considerations, providing a comprehensive overview of the study's structure.

3.2 Research Design

A descriptive survey study design was utilized by the investigator. By giving questionnaires to a sample of people, a descriptive survey study design approach is employed toward collecting data on people's attitudes, opinions and habits regarding any educational difficulties, according to Kombo and Orodho (2002). This study utilized a descriptive survey approach as it is appropriate for gathering primary data on the attitudes, pedagogical expertise, technical know-how, and professional credentials of the instructors. According to Mills, Gay and Airman (2021) the design provided a chance to make descriptive claims about a sizable population.

3.3 Study Area

The study was undertaken in Navakholo Sub-County in Kakamega County due to its unique challenges and low academic performance, particularly in the Kenya Certificate of Secondary Education (KCSE) rankings, where it has been ranked among the lowest-performing sub-counties. Navakholo faces various challenges, including inadequate access to essential services such as communication, health, and education, which may impact the quality of education and the implementation of the curriculum.

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Given these circumstances, it was crucial to investigate how school-based teacher support systems could influence curriculum implementation in Navakholo's public secondary schools. By understanding the role and impact of teacher support in this specific context, the study aimed to identify practical and effective strategies to improve curriculum delivery and ultimately enhance academic performance in the sub-county.

The Sub-County is characterized by adequate although unpredictable rainfall. There is inadequate access to services including communication, health, and education. One of Kakamega County's twelve sub counties is Navakholo. In previous KCSE ranking, Navakholo was ranked among the worst performing sub counties. It was thus imperative to understand how school-based teacher support system could influence curriculum implementation in public secondary schools in Navakholo sub-county.in order to seek practical ways.

3.4 Study Population

The 36 school Principals are chosen as they are in direct charge of the secondary school's curriculum implementation, including 10,509 teachers who are at the center of curriculum implementation. In total, the study targets 10,545 respondents who are involved in school-based teacher support system and curriculum implementation in public secondary schools in Navakholo Sub-County.

Table 1: Target population

Details	**Target Population**
Principals	36
Teachers	10509
Total	**10,545**

Source: MoE (2023)

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3.5 Sample technique, sample size and Sampling Procedures

This study employed a stratified random sampling technique to ensure that all categories within the target population were adequately represented. Stratified sampling was chosen due to the diverse characteristics of the schools and participants, which included teachers, school administrators, and students from various public secondary schools in Navakholo Sub-County. Mugenda and Mugenda (2015), notes that for a sample to be considered representative of the entire population, it must be sufficiently large. The researcher therefore used Probability Proportional to Size formula to determine the sample size demonstrated in Table 2 below.

Table 2: Sample size

Details	**Sample size(percentage)**
Principals	7
Teachers	194
Total	**201**

Source: Research data (2023)

3.6 Data Collection Instruments

To assemble data, the research used interview schedules, questionnaires, and document analysis. These are covered in the following sections.

3.6.1 Questionnaires for Teachers and Students

To obtain comprehensive alongside personal data from the respondents, the researcher provided teachers with both open-ended and closed questionnaires. Teachers questionnaires were used by the researcher. According to Mugenda and Mugenda (2015), the researcher would be able to get data from a sizable number of respondents in a plethora of time. Questionnaires in Kothari (2021) view, are research instruments that allow investigators to swiftly and precisely gather data on practices and present conditions while also eliciting opinions and attitudes. Both generic

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information (bio data) and particular information were requested by means of the questionnaires on the impact of school-based teacher support system on curriculum implementation in public secondary schools in Navakholo Sub County.

3.6.2 Interview Schedule for Principals

The six principals that make up the sample size were interviewed by the researcher. One method of finding out about the attitudes and opinions of a group is through an interview. All of the study's goals were covered by the questions in the interview guidelines. According to Kothari (2021), interviews yield more dependable, legitimate, and conceptually satisfying findings than questionnaires especially in societies where contact is highly customized. He claims that interviews provide more cooperative and enlightening responses than questionnaires. Open-ended questions were included in the interview schedules to test the responses and extract valuable information.

3.6.3 Focus Group discussion

The study employed FGD to capitalize on group dynamics, allowing participants to interact, develop each other's comments and exchange ideas. The group setting fostered a natural flow of conversation and provides a platform for participants to express diverse viewpoints on the subject matter.

3.7 Piloting

A pilot study was carried out by the researcher in two Mumias East Sub County schools. Pilot research was carried out in two schools in Mumias East Sub County public secondary schools that are not included in the study's sample. Through piloting, the investigator was able to assess the validity and dependability of the study tools. To make sure the instruments measures what they are designed to measure, the researcher decided to utilize the test-retest procedure to perform a pilot study in Mumias East Sub County.

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3.8 Validity of the Research Instruments

To ensure that the research instruments are valid, the researcher ascertained the information contained in the questionnaires through content validity and by conducting pilot research to pre-test the data collecting instruments by which the instruments' validity was determined. In order to evaluate the research equipment, the researcher consulted with lecturers and supervisors for expert opinion. The questionnaires was designed to align with the study's research goals (Kothari, 2021).

3.9 Reliability of the Research Instruments

The extent to which a research tool yields reliable results when tested again is known as its reliability (Kothari, 2021). The degree of consistency in results gained from an instrument is known as its dependability. All interviewers utilized the same interview questions, which was created with consideration for the study's goal, in order to guarantee interviewer dependability. The consistency of the questionnaire with the competencies considered necessary for the position guaranteed its validity and reliability. Mugenda and Mugenda (2003) state that a correspondence coefficient of 0.7 or higher is desirable; hence, a correlation of 0.7 or higher was deemed sufficient for data gathering tools.

3.10 Procedure for Data Collection

The researcher acquired a letter for data collection from the University. This letter was utilized towards application for a license from the National Commission for Science, Technology and Innovation (NACOSTI). This would make it possible for the researcher to do the study in the public secondary schools in Kakamega County; upon the issuance of the research permit, the researcher then obtained a clearance from the County Education officer to visit each of the schools under study. Before the actual study, the researcher made an acquaintance visit in all selected public secondary schools. The appointment was booked with sampled respondents to make adequate

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preparation for that purpose. After that, the questionnaires were given on the same day to instructors and students at the schools that were sampled.

3.11 Data Analysis and Presentation

A combination of qualitative and quantitative research methods was utilized in this investigation for analysing the collected data, employing both descriptive and analytical statistics. After data analysis, the finished instruments were gathered and compiled. Descriptive statistics was used to examine quantitative data, which were then e shown using tables, bar graphs alongside pie charts. The Statistical Package for Social Sciences (SPSS) version 25 was used to code and enter the data into the computer for analysis. Furthermore, the researcher performed a linear regression in order to measure the degree of strength and effect among the variables. Conversely, as stated by Mugenda and Mugenda (2015), open-ended questions yields qualitative data that were categorized, themes, and patterns relevant to the study's goals.

3.12 Ethical Considerations

During this study, participants received assurance that they were not be under influenced to participate and that they had the option to decline to answer the questions or even refuse to submit the questionnaire (Judkis-Cohn et al., 2014). Respondents were not under any influence either by way of promised incentives, benefits, or coercion in a bid to make them answer questions. Furthermore, respondents were not be obligated to disclose their identities by way of personal names, names of institutions or where they worked.

The aim is to keep the information given, confidential and also to protect the identities of respondents safe (Dodo et al., 2014). Anonymity of the respondents were maintained throughout the process as a way of avoiding legal pitfalls that may affect the outcome of the research. Due to assurance of confidentiality, the respondents gave honest answers to questions in the questionnaire. In line with advice by Keough and Tanabe (2011) which states that a researcher must get consent

from relevant authorities before moving to the field for data collection, permits were sought and supplied by National Commission for Science and Technology (NACOSTI), the Office of the Directorate of Graduate Studies at MKU.

The recommendation by American Psychological Association (APA, 2010) was put into consideration, thus the researcher acknowledged all referenced documents. Additionally, the researcher refrained from the utilization of false data as well as presentation of false research methodology and/ or results. Consequently, all interested stakeholders had access to results of this study when they need them. The study was also be subjected to an anti-plagiarism test for originality.

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CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND DISCUSSION

4.1 Introduction

This chapter provides the analysis, presentation, and interpretation of the data on the support system and curriculum implementation in public secondary schools in Navakholo sub county, Kenya.

4.2 Response rate

The study on the support systems on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya, sought to establish the response rate, reflects the proportion of distributed questionnaires and interview invitations that were completed and returned. The response rate for each type of respondents is shown in Table 4.1 below.

Table 4.1 Response rate

		Target	Number responded	Response rate (%)
Valid	Principals	6	6	100%
	Teachers	194	194	100%
	Total	200	200	

Source (Research Data, 2024)

The results from Table 4.1 reveals that the study's sample consisted of a total of 200 participants, which included 6 principals and 194 teachers from public secondary schools in Navakholo Sub-County. Principals accounted for a relatively small portion of the sample, representing 100% of the total participants (6 out of 6) while teachers made up the majority, constituting 100% of the sample (194 out of 194). This distribution reflects the larger population of teachers compared to principals in the schools under investigation.

The high proportion of teachers is significant because they are directly involved in the day-to-day implementation of the curriculum and are the primary recipients of the support systems designed to enhance teaching effectiveness. Principals, though fewer in number, play a crucial role in overseeing curriculum implementation and teacher support systems at the institutional level. The balanced involvement of both groups ensures that the study captures a comprehensive view of how teacher support systems are perceived and how they impact curriculum implementation across different levels of school management (Fullan, 2024).

4.3 Demographic profile

The demographic profile of the participants in the study on the support systems and curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya, provides essential understandings into the characteristics of the respondents such as their gender, age brackets, level of education, years of experience in the profession, current position, and type of school they serve.

4.3.1 Gender of the respondents

The study sought to establish the gender of the respondents as shown in table 4.2 below.

Table 4.2 Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	106	54.0	54.0	54.0
	Female	90	46.0	46.0	100.0
	Total	196	100.0	100.0	

Source (Research Data, 2024)

The results from Table 4.2 above shows that 106 (54%) were male, and 90 (46%) were female.. This representation suggests that the perspectives of both male and female educators are well captured in the study, ensuring that the findings reflect diverse gender experiences in relation to teacher support systems and curriculum implementation. Research suggests that male and female

educators might experience support structures differently due to varying social, professional, and cultural expectations (Moore, 2022).

4.3.2 Age brackets of the respondents

The study sought to establish the age brackets of the respondents as shown in table 4.3 below.

Table 4.3 Age in years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20–30Years	65	33.2	33.2	33.2
	31-40Years	54	27.6	27.6	60.8
	41-50Years	31	15.8	15.8	76.6
	50 Years and above	46	23.4	23.4	100.0
	Total	196	100.0	100.0	

Source (Research Data, 2024)

Table 4.3 shows that 33.2% (65) were aged between 20 and 30 years, representing the largest age group. This group likely consists of younger teachers who may be relatively new to the profession, bringing fresh perspectives on curriculum implementation but also requiring more structured support systems as they adapt to the demands of teaching, 27.6% (54) were aged between 31 and 40 years. These teachers are typically in the middle of their careers, balancing both classroom experience and ongoing professional development. 23.4% (46) were aged 50 years and above. This group comprises seasoned educators, likely occupying leadership positions or nearing the end of their careers. Their extensive experience in the profession provides them with deep understandings into the challenges of curriculum implementation, and they may require less direct support but more involvement in decision-making and advisory roles while 15.8% (31) were aged between 41 and 50 years, constituting a smaller portion of the sample. Teachers in this age bracket often have

extensive experience and are likely to be influential in mentoring younger colleagues and shaping the implementation of the curriculum.

The distribution of ages in the study suggests a balanced representation of both younger and more experienced teachers. Each age group brings different expectations and needs in terms of school-based teacher support systems. Younger teachers may seek more guidance and training opportunities, while more experienced educators might require less direct support but play key roles in leadership and mentoring (Hargreaves & Fullan, 2022).

4.3.3 Academic Qualification

The study sought to establish the academic qualification of the respondents. The results is as shown in Table 4.4 below.

Table 4.4 Academic Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's Degree	136	69.4	69.4	69.4
	Master's Degree	47	23.9	23.9	93.3
	Any other	13	6.7	6.7	100.0
	Total	196	100.0	100.0	

Source (Research Data, 2024)

The results from Table 4.4 indicates that 69.4% (136) possess a Bachelor's degree, which is the minimum requirement for teaching in public secondary schools in Kenya, 23.9% (47) hold a Master's degree. These individuals have pursued further education, which may enhance their ability to interpret and implement more advanced aspects of the curriculum. Teachers and principals with higher academic qualifications often play key roles in school leadership, mentoring, and policy

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execution, particularly in matters concerning curriculum development and instructional practices while 6.7% (13) reported having other qualifications, which may include Phd, or specialized training. This level of academic attainment is crucial for effective curriculum implementation, as teachers with higher qualifications are generally better equipped to handle the complexities of modern educational demands (Ndegwa, 2021). Moreover, the presence of a significant number of Master's degree holders suggests that the teaching profession in Navakholo Sub-County is actively engaging in professional development, which is essential for the successful execution of school-based support systems (Kimanzi & Mbiti, 2023).

4.3.4 Years in profession

The study sought to establish the professional years of the respondents. The results is as shown in Table 4.5 below.

Table 4.5 Professional Years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 5 Years	61	31.1	31.1	31.1
	6-10Years	59	30.1	30.1	61.2
	11-15Years	34	17.3	17.3	78.5
	Above 16 Years	42	21.5	21.5	100.0
	Total	196	100.0	100.0	

Source (Research Data, 2024)

The results from Table 4.5 outlines the professional experience of the respondents in terms of years in the teaching profession, 31.1% (61) have less than 5 years of professional experience,30.1% (59) have between 6 and 10 years of experience, 21.5% (42) have over 16 years of experience. This group represents seasoned educators who are likely well-versed in curriculum changes over the years and possess deep understandings into teaching practices while 17.3% (34) have between 11

and 15 years of experience. As mid-career professionals, these individuals likely play a dual role as both recipients of support and mentors to younger colleagues.

The wide range of professional experience among the respondents suggests that teacher support systems must be adaptable to meet the varying needs of educators at different stages in their careers. Early-career teachers often require more guidance, while more experienced teachers may seek professional growth opportunities and leadership roles in curriculum development (Darling-Hammond, 2022).

4.3.5 Current position

The study sought to establish the current position of the respondents, the results is as shown in Table. 4.6.

Table 4.6 Current Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Head teacher	24	12.2	12.2	12.2
	HOD	5	2.6	2.6	14.8
	Any other	167	85.2	85.2	100.0
	Total	196	100.0	100.0	

Source (Research Data, 2024)

Table 4.6 presents the distribution of the respondents based on their current professional positions in their respective schools. 12.2% (24) hold the position of head teacher. As the senior leaders in their schools, head teachers are directly responsible for overseeing curriculum implementation and ensuring that teacher support systems are effectively managed. Their leadership roles give them a strategic perspective on how support systems can be structured to enhance teaching and learning outcomes.2.6% (5) are heads of departments (HODs), play a crucial role in the day-to-day oversight of curriculum implementation within specific subject areas. They are responsible for providing

instructional leadership to teachers, supporting curriculum delivery, and ensuring that departmental goals align with the broader school objectives while 85.2% (167) hold other positions, which may include roles such as deputy head teachers, curriculum coordinators, or administrative support staff. The study implies that departmental leadership is often the first point of contact for teachers seeking support in curriculum implementation. Additionally, the significant presence of head teachers ensures that the study considers how top-level management views the overall structure and efficacy of support systems in their schools (Fullan, 2022).

4.3.6 Type of school

The study sought to establish the type of the school of the respondents, the results is as shown in Figure 4.1 below.

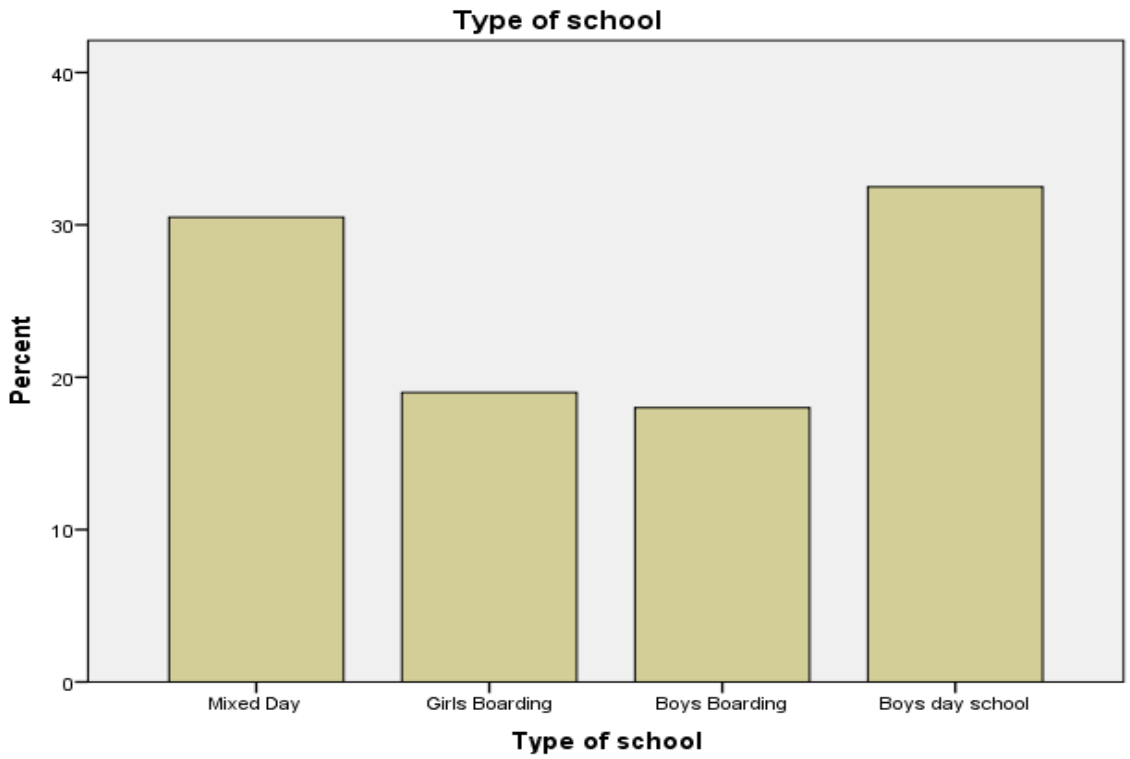

Figure 4.1: Type of school

The results from Figure 4.1 above suggests among the respondents, mixed day school comprised of 30.5% (61 respondents) of the respondents. This significant representation suggests that mixed day schools play a critical role in the educational landscape of Navakholo Sub County due to their broader enrollment trends and the educational preferences of families in the region, which often favor accessible schooling options (Kisaka et al., 2020).

Boys day schools had 32.5% (65 respondents), indicating that these institutions also have a substantial presence in the sub-county. The relatively high proportion of respondents from boys day schools may suggest specific dynamics related to teacher support systems and curriculum implementation in these environments. Such schools often focus on creating supportive teaching and learning conditions that could enhance educational outcomes (Makhanda, 2021). Girls boarding schools and boys boarding schools represented lower percentages of the respondents, with 19.0% (38 respondents) and 18.0% (36 respondents), respectively. This lower representation may highlight existing challenges related to enrollment and retention in these school types, reflecting societal and cultural factors that influence educational opportunities for girls and boys in boarding settings (Njeru & Orodho, 2014).

4.4 influence of lesson study on curriculum implementation

The following sub-sections provide an in-depth analysis of the data collected on influence of lesson study on curriculum implementation.

4.4.1 Descriptive statistics on influence of lesson study on curriculum implementation

The study employed both descriptive and inferential statistical analysis to determine the influence of lesson study on curriculum implementation in public secondary schools in Navakholo Sub-

County, Kenya. Descriptive statistics, including frequency, percentage, and mean distribution, were used to assess the level of agreement on a five-point Likert scale regarding the influence of lesson study on curriculum implementation. The findings related to lesson study practices and their impact on curriculum implementation were analyzed and summarized in Table 4.7.

Table 4.7: Lesson study practices and curriculum implementation

Statement	SA %	A %	N %	D %	SD %	Mean
1. Engage in regular lesson study	30	40	15	10	5	4.00
2. There is enough time for rotational lesson study	20	25	20	25	10	3.20
3. We review the lesson as a team after every lesson.	35	30	10	15	10	3.75
4. The teachers of the same subject conduct a lesson study.	25	35	15	15	10	3.55

Source (Research Data, 2024)

The findings from Table 4.7 reveal significant understandings into the engagement of teachers in lesson study practices and their influence on curriculum implementation. 70% of respondents either strongly agree (30%) or agree (40%) that they engage in regular lesson study, resulting in a mean score of 4.00. This high level of agreement highlights a strong commitment among teachers to participate actively in lesson study activities, suggesting that such practices are not only common but also potentially beneficial for enhancing curriculum implementation (Li & Saito, 2016; Lewis, 2002). However, when assessing the sufficiency of time allocated for rotational lesson study, the findings are less favorable. Only 45% of respondents feel there is enough time for this practice, with 20% strongly agreeing and 25% agreeing, while 35% express disagreement (25% disagree and 10% strongly disagree). The resulting mean score of 3.20 indicates that time constraints may

significantly hinder the effectiveness of lesson study. This finding was also supported by one of the principals who had the following to say:

> *"……Sometimes, the lack of time for lesson study meetings can be a challenge. We want to collaborate more but have to balance it with our teaching duties……."*

Another principal had the following to say:

> *"Participating in lesson study has allowed us to work closely with our colleagues. We share our teaching methods and learn from each other's experiences."*

This implies that engaging students in regular lesson study improves curriculum implementation in public secondary schools in Navakholo Sub County. This highlights a critical area for improvement, as addressing these time limitations could facilitate better curriculum implementation and overall teaching effectiveness (Borko, 2004; Stigler & Hiebert, 1999).

Additionally, the study indicates a strong culture of collaboration among teachers regarding lesson reviews. The results show that 65% of teachers agree (35% strongly agree and 30% agree) that they engage in team reviews of lessons, leading to a mean score of 3.75. This positive response suggests that collaborative review processes are being practiced, which can enhance instructional strategies and contribute positively to curriculum delivery (Darling-Hammond & McLaughlin, 2021; Timperley, 2018). Furthermore, collaboration among subject teachers in conducting lesson studies is also recognized, with 60% of respondents agreeing (25% strongly agree and 35% agree) that teachers within the same subject area participate in lesson study together, resulting in a mean score of 3.55.

This finding was also supported by one of the principals who had the following to say:

"……."Through lesson study, I have found that collaboration improves our teaching strategies. We discuss what worked and what didn't, leading to better outcomes for our students."……."

Another principal had the following to say:

"The collaborative aspect of lesson study has built a strong community among teachers. We feel more supported and motivated to implement the curriculum effectively……."

This indicates that such collaborative practices are valued among teachers and likely foster improved curriculum implementation through shared knowledge and strategies (Vescio, Ross, & Adams, 2021).

4.4.2 Regression analysis on influence of lesson study on curriculum implementation

The study employed both descriptive and inferential statistical analysis to determine the influence The study sought to establish the influence of lesson study on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya using regression analysis.

Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.620[a]	.384	-.017	.770	.004	.182	1	195	.012

a. Predictors: (Constant), Lesson study

b. Dependent Variable: Curriculum implementation

Source (Research Data, 2024)

Table 4.8 provides a summary of the regression analysis conducted to assess the influence of lesson study on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya. The study therefore, modeled the influence of lesson study on curriculum implementation

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in Kenya using linear regression analysis. In the model, the value of the coefficient indicates influence of lesson study on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya. The positive and negative signs of the coefficient indicate increased and decreased influence of lesson study on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya respectively. The significance of the relationship between a given independent variable and the dependent variable was tested at p=0.05.

The results of the regression analysis in Table 4.7 shows that the constant of the regression is statistically significant indicating that the variables fit in the model were able to predict the outcome variable. The variables in the model; (influence of lesson study's) were able to predict 0.620 (62%) of the variation on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya. Therefore, this study buttresses with a study done by Garet et al (2021) who found that professional development programs, including lesson study, are effective in improving teachers' instructional practices. Their study used regression analysis to examine the relationship between professional development and teacher practices, providing evidence that such interventions can positively influence curriculum implementation.

4.5 Peer lesson observation on curriculum implementation

The following sub-sections provide an in-depth analysis of the data collected on influence of peer lesson observation on curriculum implementation.

4.5.1 Descriptive statistics on Peer lesson observation on curriculum implementation

The study employed both descriptive and inferential statistical analysis to determine the influence of peer lesson observation on curriculum implementation in public secondary schools in Navakholo

Sub-County, Kenya. Descriptive statistics, including frequency, percentage, and mean distribution, were used to assess the level of agreement on a five-point Likert scale regarding the influence of peer lesson observation on curriculum implementation as summarized in Table 4.9.

Table 4.9: Peer lesson observation and curriculum implementation

Statement	SA %	A %	N %	D %	SD %	Mean
1. My ability to watch colleagues throughout class will improve my capacity to implement the curriculum.	35	45	10	5	5	4.10
2. I regularly get observed and also get observed in class as I teach.	30	40	15	10	5	3.85
3. Reviews of the lesson regarding Instructional methods are made after the observation	40	35	10	10	5	3.90

Source (Research Data, 2024)

The results from table 4.9 shows that indicates that 80% of respondents either strongly agree (35%) or agree (45%) that their ability to watch colleagues during class improves their capacity to implement the curriculum, resulting in a mean score of 4.10. This high level of agreement suggests that teachers recognize the value of peer observation as a means to enhance their instructional practices and curriculum delivery. This finding was also supported by one of the principals who had the following to say:

> *"Peer observations have been a transformative component of our professional development program. Teachers who participate in peer observations tend to implement the curriculum more effectively as they receive constructive feedback from colleagues. This feedback often highlights areas for improvement that teachers might not have noticed themselves. However, challenges such as scheduling conflicts and ensuring that all observations are genuinely reflective can impact the overall effectiveness of this practice……"*

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Seventy percent (70%) of respondents agree (30% strongly agree and 40% agree) that they regularly observe others and are observed in their own classes, leading to a mean score of 3.85. This finding reflects a positive culture of peer observation within the school environment, indicating that teachers are actively engaged in reciprocal observation practices while 75% of respondents agree (40% strongly agree and 35% agree) that reviews of instructional methods are conducted after observations, with a mean score of 3.90. This was supported by another principal who had the following to say:

> *" Peer observations have been a positive influence on curriculum implementation in our schools. They promote professional dialogue among teachers and encourage the sharing of strategies that support curriculum goals. This practice has led to more consistent application of curriculum standards across different classes. However, to maximize the benefits, we need to ensure that observations are systematically integrated into teachers' schedules and that there is sufficient support for both observers and those being observed."*

This response suggests that the practice of reviewing lessons after observations is common and valued among teachers.

4.5.2 Regression analysis on Peer lesson observation on curriculum implementation

The study sought to establish the influence of Peer lesson observation on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya using regression analysis.

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Table 4.10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.760[a]	.578	-.020	.771	.001	.060	1	195	.008

a. Predictors: (Constant), Peer lesson observation
b. Dependent Variable: curriculum implementation

Source (Research Data, 2024)

The results from Table 4.10 provides an overview of the regression analysis conducted to evaluate the influence of peer lesson observation on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya. R Value (0.760) indicates a strong positive correlation between peer lesson observation and curriculum implementation. This suggests that schools with robust peer lesson observation practices are likely to see improvements in how the curriculum is implemented. R Square (0.578) suggest that approximately 57.8% of the variance in curriculum implementation can be explained by peer lesson observation. This substantial percentage indicates that peer lesson observation is a major factor influencing curriculum implementation, although other factors may also contribute to the remaining variance. This study agrees with a study done by Joyce, (2022) who highlighted the role of peer observations in professional development and its impact on improving curriculum implementation. This provides a theoretical basis for the significant influence observed in the study.

4.6 Virtual Groups on curriculum implementation

The following sub-sections provide an in-depth analysis of the data collected on influence of virtual groups on curriculum implementation.

4.6.1 Descriptive statistics on Virtual Groups on curriculum implementation

The study employed both descriptive and inferential statistical analysis to determine the influence of virtual Groups on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya. Descriptive statistics, including frequency, percentage, and mean distribution, were used to assess the level of agreement on a five-point Likert scale regarding the influence of Virtual Groups on curriculum implementation as summarized in Table 4.11.

Table 11: Virtual Groups and curriculum implementation

	Statement	SA %	A %	N %	D %	SD %	Mean
1.	I belong to an online community with other teachers from all over the country and beyond.	40	35	15	5	5	4.05
2.	Belonging to these groups, such as Whatsapp,has improved how I teach the learners.	45	40	5	5	5	4.20
3.	I get help from these groups and also experience an exchange of ideas.	50	30	10	5	5	4.25

Source (Research Data, 2024)

The study finding from Table 4.11 reveals that 75% of respondents either strongly agree (40%) or agree (35%) that they belong to an online community with other teachers from across the country and beyond, resulting in a mean score of 4.05. This high level of agreement indicates a significant engagement among teachers in virtual communities, suggesting that such platforms are prevalent and utilized for professional interaction. This finding was supported by one of the principals who had the following to say:

> *"Virtual groups have been a significant asset for our school in terms of curriculum implementation. They allow teachers to collaborate and share resources efficiently, even if they are not physically present at the same location. This has led to more coherent curriculum delivery across different classes. However, we face challenges with internet connectivity and ensuring that all teachers are engaged and making the most of these virtual interactions……."*

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85% of respondents agree (45% strongly agree and 40% agree) that their participation in groups like WhatsApp has improved their teaching practices, leading to a mean score of 4.20. This finding highlights the positive impact that these virtual groups have on teachers' instructional methods while 80% of respondents agree (50% strongly agree and 30% agree) that they receive help and experience an exchange of ideas within these groups, with a mean score of 4.25. This finding was also supported by one of the principals who had the following to say:

> *" ……..Virtual groups have been quite beneficial in facilitating communication among teachers and aligning our curriculum delivery. I appreciate the ability to quickly exchange ideas and receive feedback from colleagues. However, sometimes the virtual format can be less personal, and I feel that face-to-face interactions might be more effective for in-depth discussions. Balancing virtual and in-person meetings could enhance our collaborative efforts."*

This strong agreement reflects the collaborative nature of these virtual groups, emphasizing their role as a valuable resource for professional development.

4.6.2 Regression analysis on Virtual Groups on curriculum implementation

The study sought to establish the influence of virtual groups on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya using regression analysis.

Table 4.12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.786[a]	.618	.014	.758	.035	1.685	1	195	.002

a. Predictors: (Constant), Virtual groups
b. Dependent Variable: curriculum implementation

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The study therefore, modeled the influence of virtual groups on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya using linear regression analysis. The positive signs of the coefficient indicate increased influence of virtual groups on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya respectively. The significance of the relationship between a given independent variable and the dependent variable was tested at p=0.05.

The results of the regression analysis in Table 4.12 shows that the constant of the regression is statistically significant indicating that the variables fit in the model were able to predict the outcome variable. The variables in the model; (influence of virtual groups) were able to predict 0.618 (61.8%) of the variation in curriculum implementation in public secondary schools in Navakholo Sub County, Kenya. This results agrees with a study done by Guskey (2022), on professional development highlighting the importance of collaborative and virtual groups in facilitating teacher change and improving instructional practices, aligning with the study's findings that virtual groups positively impact curriculum implementation.

4.7 ICT integration on curriculum implementation

The following sub-sections provide an in-depth analysis of the data collected on influence of ICT integration on curriculum implementation.

4.7.1 Descriptive statistics on ICT integration on curriculum implementation

The study employed both descriptive and inferential statistical analysis to determine the influence of ICT integration on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya. Descriptive statistics, including frequency, percentage, and mean distribution, were used to assess the level of agreement on a five-point Likert scale regarding the influence of Virtual Groups on curriculum implementation as summarized in Table 4.13.

Table 4.13: Virtual Groups and curriculum implementation

Statement	SA %	A %	N %	D %	SD %	Mean
1. All students have access to computers and/or the internet	30	25	20	15	10	3.30
2. I often use the projector or my phone in lesson delivery.	45	35	10	5	5	4.15
3. The use of ICT can improve lesson delivery	50	40	5	3	2	4.25

Source (Research Data, 2024)

The study findings from table 4.13 reveals that 55% of respondents either strongly agree (30%) or agree (25%) that all students have access to computers and/or the internet, with a mean score of 3.30. This relatively moderate agreement suggests that while some progress has been made in providing access to ICT resources, significant gaps still exist. This finding was supported by one of the principals who had the following to say:

> *"……the integration of ICT into our lessons has significantly improved curriculum implementation. With the use of digital tools and resources, teachers are able to present content in more engaging and interactive ways. This has led to better student understanding and retention of the curriculum material. However, we face challenges such as limited access to technology and insufficient training for some teachers, which can hinder the effective use of ICT in classroom……"*

Eighty (80%) of respondents agree (45% strongly agree and 35% agree) that they often use projectors or their phones during lesson delivery, resulting in a mean score of 4.15. This high level of agreement indicates that teachers are actively incorporating ICT tools into their teaching practices while 90% of respondents agree (50% strongly agree and 40% agree) that the use of ICT can improve lesson delivery, leading to a mean score of 4.25. This finding was also supported by one of the principals who had the following to say:

" The use of ICT in my lessons has made curriculum delivery more engaging and accessible for students. Interactive whiteboards and educational apps have been particularly useful in explaining difficult topics. However, the integration process is not without its difficulties. Some students lack basic digital skills, and not all teachers are equally proficient with ICT tools. Ongoing professional development and support are crucial to maximizing the benefits of ICT in education……."

This strong consensus among teachers underscores the belief in the positive impact of ICT on their instructional methods.

4.7.2 Regression Analysis on ICT integration on curriculum implementation

The study sought to establish the influence of ICT integration in lesson on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya, using regression analysis.

Table 4.14 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.780[a]	.608	-.015	.769	.006	.287	1	195	.059

a. Predictors: (Constant), ICT

b. Dependent Variable: curriculum implementation

Source (Research Data, 2024)

The study therefore, modeled the influence of ICT integration in lesson on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya using linear regression analysis. The positive signs of the coefficient indicate increased influence of ICT on curriculum implementation in public secondary schools in Navakholo Sub County, Kenya respectively. The significance of the relationship between a given independent variable and the dependent variable was tested at p=0.05.

The results of the regression analysis in Table 4.14 shows that the constant of the regression is statistically significant indicating that the variables fit in the model were able to predict the outcome variable. The variables in the model; (influence of ICT) were able to predict 0.608(60.8%) of the variation in curriculum implementation in public secondary schools in Navakholo Sub County, Kenya. The findings are consistent with the literature on the role of ICT in education. According to Harris and Muijs (2023), technology has the potential to enhance educational practices and curriculum delivery, which supports the observed positive correlation between ICT and curriculum implementation. However, Cuban (2021) highlights that while ICT integration holds promise, the results can be mixed, reflecting the study's finding that the influence of ICT might not be uniformly strong across different contexts.

CHAPTER FIVE

SUMMARY, CONCULUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter provides a summary of the study's findings, conclusions, recommendations, and suggestions for further research with regards to support system and curriculum implementation in public secondary schools in Navakholo sub county, Kenya.

5.2 Summary of findings

The following sub-sections provides a summary of findings as per the objectives of the study

5.2.1 Lesson study on curriculum implementation

The study examined the influence of lesson study on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya, using regression analysis. The results, as shown in Table 4.7, indicates that lesson study accounted for 62% of the variation in curriculum implementation, suggesting a significant positive impact. This aligns with previous research by Garet et al. (2021), which found that professional development programs, like lesson study, improve teachers' instructional practices and enhance curriculum implementation. Interviews conducted with educational stakeholders provided further insights. Respondents noted that lesson study has encouraged teacher collaboration, reflection, and consistent curriculum application across classrooms. However, challenges such as limited resources, administrative support, time constraints, and resistance from some staff were highlighted as barriers to the full adoption of lesson study in schools.

5.2.2 Peer lesson observation on curriculum implementation

The study aimed to determine the influence of peer lesson observation on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya, using regression analysis. The findings indicate a strong positive correlation (R = 0.760) between peer lesson observation and curriculum implementation, with peer lesson observation explaining 57.8% of the variance. This suggests that peer observations play a critical role in enhancing how the curriculum is implemented, with teachers benefiting from feedback and shared strategies. Interviews with respondents supported the quantitative data, highlighting that peer observations improve curriculum delivery but are hindered by challenges such as scheduling conflicts and inconsistent practices.

5.2.3 Virtual Groups on curriculum implementation

The study examined the influence of virtual groups on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya, using regression analysis. The analysis revealed a strong positive correlation (R = 0.786) between virtual groups and curriculum implementation, with 61.8% of the variation in curriculum implementation explained by the use of virtual groups. The results suggest that virtual groups significantly enhance curriculum delivery by facilitating collaboration and resource sharing among teachers. Interviews further supported this, with respondents highlighting the advantages of efficient communication and resource sharing through virtual groups but also noting challenges such as internet connectivity and the impersonal nature of virtual interactions.

5.2.4 ICT on curriculum implementation

The study explored the impact of ICT integration on curriculum implementation in public secondary schools in Navakholo Sub-County, Kenya, through regression analysis. The analysis found a strong positive correlation (R = 0.780) between ICT integration and curriculum implementation, with ICT explaining 60.8% of the variance in curriculum implementation. These findings align with previous research by Harris and Muijs (2023), which emphasized the potential of ICT to enhance education. However, challenges such as unequal access to technology and varying proficiency levels among teachers were identified, echoing Cuban's (2021) observations about mixed results in ICT adoption. Interviews with school staff further reinforced the positive influence of ICT in making lessons more engaging and improving student comprehension. However, barriers such as insufficient technology access and the need for teacher training were highlighted as obstacles to the full implementation of ICT in classrooms.

5.3 Conclusion

The study concludes that lesson study significantly influences curriculum implementation in public secondary schools in Navakholo Sub-County, accounting for 62% of the variation in effective curriculum delivery. Teachers involved in lesson study demonstrate enhanced collaboration, reflection on teaching practices, and consistency in curriculum application across classrooms. However, challenges such as limited resources, time constraints, and resistance from some teachers hinder the full potential of lesson study.

The study concludes that peer lesson observation significantly enhances curriculum implementation in Navakholo Sub-County's public secondary schools, accounting for 57.8% of the observed improvements. Peer feedback fosters professional dialogue and sharing of best practices, leading to a more consistent application of the curriculum. However, logistical challenges like scheduling conflicts and uneven implementation reduce the effectiveness of peer observation programs.

The study concludes that virtual groups have a significant positive impact on curriculum implementation in public secondary schools in Navakholo Sub-County, explaining 61.8% of the observed variation. Virtual groups promote collaboration, resource sharing, and more coherent curriculum delivery across classes. However, challenges such as internet connectivity issues and the lack of personal interaction during virtual meetings limit the full potential of this practice.

The study concludes that ICT integration has a significant positive influence on curriculum implementation in public secondary schools in Navakholo Sub-County, explaining 60.8% of the variation. However, the effectiveness of ICT depends on factors such as access to technology and teacher proficiency, which can either enhance or limit its impact on curriculum delivery.

Mount Kenya University

5.4 Recommendation

The study recommends implementing targeted training and awareness programs to reduce teacher resistance and foster a culture of collaboration and continuous professional development through lesson study.

The study recommends that schools should formalize peer lesson observation as part of regular professional development to ensure consistent and structured feedback mechanisms that improve curriculum implementation.

The study recommends that schools should invest in improving internet connectivity to ensure that virtual groups can function effectively, enabling all teachers to participate fully in collaborative efforts.

The study recommends that regular assessments of ICT integration should be conducted to address any challenges, such as lack of proficiency or access, and to improve the overall impact of ICT on curriculum implementation.

5.5 Suggestions for Further Research

Future research could explore the support systems on curriculum implementation in other sub-counties or regions in Kenya. This would allow for comparison across diverse contexts and provide insights into regional differences in teacher support and curriculum outcomes.

Mount Kenya University

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Mount Kenya University

APPENDICES

Appendix 1: Introduction Letter to Principals

Mount Kenya University,

P.O Box 342-01000,

Thika,-Kenya.

Dear Sir/Madam,

RE: REQUEST FOR RESEARCH DATA

I am a postgraduate student at Mount Kenya University pursuing a Master's degree in Educational Leadership and Management. As part of the course requirement, I am in the process of carrying out research and hereby request you allow your students to be part of my sample population.

I wish to assure you that all the responses in the questionnaire will be treated confidentially and will be used for academic purposes only.

Thank you in advance.

Yours Sincerely

…… ……..

Khakasa M Munala

Mount Kenya University

Appendix II: Informed consent form

MOUNT KENYA UNIVERSITY

OFFICE OF THE CHAIRMAN ETHICS REVIEW COMMITTEE

My name is Khakasa M Munala. I am a Masters student from Mount Kenya University. I am conducting a study titled "INFLUENCE OF SCHOOL BASED TEACHER SUPPORT SYSTEM AND CURRICULUM IMPLEMENTATION IN PUBLIC SECONDARY SCHOOLS IN NAVAKHOLO SUB COUNTY, KENYA" The information will be used to structure and reorganize in-service training courses for personnel involved in educational administration and management.

Procedures to be followed

Participation in this study will require that you provide some information in a questionnaire or you be interviewed.

Voluntarism

You have the right to refuse to participate in this study. Please remember the participation in this study is voluntarily. You may ask questions related to the study at any time. You may refuse to respond to any questions and you may stop an interview at any time. You may also stop being in the study at any time without any consequences.

Confidentiality

Your name will not be recorded on the questionnaire or interviews. Everything will be kept private.

Contact Information

If you have questions about the study call Dr. Ronald Kikechi 0722854827 (Supervisor) 0r 0729251004 (Researcher)

However, if you have questions about your rights as a study participant: You may contact Mount Kenya University Ethical Review Committee Secretariat on chairman.mkuerc@mku.ac.ke.

Participant's statement

The above information regarding my participation in the study is clear to me. The study has been explained to me and I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my responses will be kept private and that I can leave the study at any time.

Name of Participant: _____

_____ _____

Signature or Thumb print Date

_____ _____

Name of Representative/Witness Relationship to Subject

Researchers' statement

I, the undersigned, have explained to the volunteer in a language s/he understands, the procedures to be followed in the study and the significance of the study

_____

Name of Researcher

_____ _____

Signature Date

Mount Kenya University

Appendix III: Questionnaire for Teachers

SECTION A: GENERAL NFORMATION

This questionnaire is designed to seek information on the establish the impact of school-based teacher support system on curriculum implementation in public secondary schools in Kakamega county., Kenya.Please be as specific as honest as you can while answering the questions. The provided information will be handled with the strictest confidence.

PART A: Background information.

Please **Tick/ write down** the appropriate response.

1. Gender

   Male [ ] Female [ ]

2. Indicate the age bracket

   20-30 years [ ] 31-40 years [ ] 41-50 years [ ] 50 years and above [ ]

3. Indicate the academic qualification

   Bachelor's Degree [ ] Master's Degree [ ] any other (specify)…….

4. How long have you been in this profession?

   Below 5 years [ ] 6-10 years [ ] 11-15 years [ ] above 16 years [ ]

5. Current position

   Head teacher [ ] HOD [ ] any other specify…….

6. Type of your school

   Mixed Day [ ] Girls boarding [ ] Boys Boarding [ ]

PART B: The influence of lesson study on curriculum implementation in public secondary schools in Navakholo sub county, Kakamega County.

7. In this section, you are kindly requested to give your response concerning the influence of use of ICT on curriculum implementation in public secondary schools in Navakholo sub county, Kakamega County. (Tick (√) where appropriate).

Mount Kenya University

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
5. Engage in regular lesson study					
6. There is enough time for rotational lesson study					
7. We review the lesson as a team after every lesson.					
8. The teachers of the same subject conduct a lesson study.					

PART C: The influence of peer lesson observation on curriculum implementation in public secondary schools in Navakholo sub county, Kakamega County.

8. In this section, you are kindly requested to give your response concerning the influence of peer lesson observation on curriculum implementation in public secondary schools in Navakholo sub county, Kakamega County.

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
4. My ability to watch colleagues throughout class will improve my capacity to implement the curriculum.					
5. I regularly get observed and also get observed in class as I teach.					
6. Reviews of the lesson regarding Instructional methods are made after the observation					

PART D: The influence of virtual groups on curriculum implementation in public secondary schools in Navakholo sub county, Kakamega County.

9. In this section, you are kindly requested to give your response concerning the influence of use of virtual groups on curriculum implementation in public secondary schools in Navakholo sub county, Kakamega County.

Maunkenyu University

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
4. I belong to an online community with other teachers from all over the country and beyond.					
5. Belonging to these groups, such as Whatsapp,has improved how I teach the learners.					
6. I get help from these groups and also experience an exchange of ideas.					

PART E: The influence of use of ICT on curriculum implementation in public secondary schools in Kakamega County.

10. In this section, you are kindly requested to give your response concerning the influence of use of ICT on curriculum implementation in public secondary schools in Kakamega County (Tick (√) where appropriate).

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
4. All students have access to computers and/or the internet					
5. I oftenly use the projector or my phone in lesson delivery.					
6. The use of ICT can improve lesson delivery					

THANK YOU

Mount Kenya University

Appendix IV: Interview Guide for Principals

1. How has the implementation of lesson study influenced the overall curriculum delivery in your school?
2. Can you provide specific examples of improvements or changes in curriculum implementation resulting from the integration of lesson study?
3. In your opinion, how have peer observations impacted the effectiveness of curriculum implementation within your school?
4. Can you share instances where peer observations led to positive changes or enhancements in the curriculum delivery process?
5. How has the involvement of virtual groups affected collaboration and curriculum implementation in your school?
6. Can you highlight specific instances where virtual groups have contributed to innovative approaches in curriculum delivery?
7. How has the integration of ICT in lessons influenced the engagement and understanding of students in the curriculum?
8. Can you provide examples of improvements or challenges related to curriculum implementation that can be attributed to the use of ICT in lessons?

Mount Kenya University

Appendix V: Authorization Letter

REPUBLIC OF KENYA

MINISTRY OF EDUCATION
STATE DEPARTMENT FOR BASIC EDUCATION

Telephone:
Fax:
E-mail: wespropde@yahoo.com
When replying please quote our Ref.

County Director of Education
Kakamega County
P. O. BOX 137 - 50100
KAKAMEGA

REF: KAKA/C/GA/29/17/VOL.VI/333

14TH AUGUST, 2024

Ms. MELISA MUNALA KHAKASA
Mount kenya university
THIKA

RE: RESEARCH AUTHORIZATION

Reference is made to a letter from NACOSTI Ref No: NACOSTI/P/24/37338 dated 4th July, 2024 concerning subject matter.

This is to inform you that you have been authorized to carry out research on **'Impact of school based teacher support system and curriculum implementation in public secondary schools in navakholo sub county, Kenya'** for the period ending 12th August, 2025.

Please accord him/her any necessary assistance he/she may require.

PP HELLEN NYANG'AU

FOR COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

Appendix VI: Research License

Ref No: 303893

Date of Issue: 12/August/2024

RESEARCH LICENSE

This is to Certify that Ms.. MELISA MUNALA KHAKASA of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation *Act, 2013 (Rev.2014) in Kakamega on the topic: IMPACT OF* SCHOOL BASED TEACHER SUPPORT SYSTEM AND CURRICULUM IMPLEMENTATION IN PUBLIC SECONDARY SCHOOLS IN NAVAKHOLO SUB COUNY,KENYA. for the period ending : 12/August/2025.

License No: **NACOSTI/P/24/38721**

303893

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY &
INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

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Appendix VII: Introductory Letter

Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MED/2022/44857

13th June 2024

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki, Upper Kabete
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: KHAKASA M. MUNALA- REGISTRATION NO. MED/2022/44857

The purpose of this letter is to introduce the above named student who is pursuing **Master of Education** in the **Department of Educational Management and Curriculum Studies** in the **School of Education.**

The title of the research is **"Impact of School Based Teacher Support System and Curriculum Implementation in Public Secondary Schools in Navakholo Sub County, Kenya."** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **June, 2024 and August, 2024.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University
P. O. Box 342 - 01000, THIKA
Office of the Director,
Graduate Studies

Dr. Samuel M. Karenga, Ph.D
Director, Graduate Studies
Enc.

Appendix VII: Ethical Review Certificate

Mount Kenya University

REF: **MKU/ISERC/3786** Date: 12 June 2024
TO: **KHAKASA M MUNALA**
REG: **MED/2022/44857**

Dear Sir/Madam,

RE: IMPACT OF SCHOOL BASED TEACHER SUPPORT SYSTEM AND CURRICULUM IMPLEMENTATION IN PUBLIC SECONDARY SCHOOLS IN NAVAKHOLO SUB COUNTY, KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **2830.** The approval period is **12/06/2024 - 11/06/2025.**

This approval is subject to compliance with the following requirements;

i. Only approved documents including informed consents, study instruments, MTA will be used
ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

The Chairman
Mount Kenya University
Ethics Review Committee
P. O. Box 342 - 0100, Thika

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Appendix VII: Map of Navakholo Sub-County

Mount Keny