INFLUENCE OF PRINCIPALS' INSTRUCTIONAL SUPERVISION ON STUDENTS' ACADEMIC ACHIEVEMENTM IN KENYA CERTIFICATE OF SECONDARY EDUCATION IN BUNGOMA NORTH SUB-COUNTY

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Abstract

A secondary education is a necessary requirement for entrance to institutions of higher learning and extra skill training. The role of a principal in shaping the teaching and learning experience of students is crucial, highlighting the importance of evaluating their instructional leadership abilities. The objective of this study was to investigate the influence of Principals' instructional supervision on academic achievement in KCSE in Bungoma North Sub-County, Kenya. The research approach employed in this study was descriptive in nature. The target population consisted of 2,215 individuals, including 2,125 pupils, 84 instructors, and 6 principals. These individuals were selected from public secondary schools located in Bungoma North Sub County. The research employed a stratified random sampling method, with a sample size of 331 chosen using the Krejcie and Morgan table (1970). Structured questionnaires and interview guides were employed as the primary instruments for data collection in this investigation. The instrument underwent a validation process overseen by the experts in the area under study. The determination of the instrument's reliability was accomplished by means of a pilot study. The Cronbach's alpha coefficient for the questionnaires used in this study was found to be 0.79 for teachers and 0.78 for students. These values indicate that the instrument used to measure the variables in this study can be considered reliable. This finding suggests that the instrument had a high level of reliability. The analysis of quantitative data involved the use of descriptive statistics, which were then presented in tabular form. On the other hand, the analysis of qualitative data followed a thematic approach, with themes and sub-themes identified and presented through the use of quotations. The study established that there is a statistically significant positive correlation Principals' instructional supervision on students' academic achievement in Kenya Certificate of Secondary Education in Bungoma North Sub-County. Hence, it can be inferred that the implementation of proficient principals' instructional supervision has a positive impact on academic performance in the Kenya Certificate of Secondary Education.

Keywords: *Principals' instructional supervision, academic achievement, Kenya Certificate of Secondary Education*

INTRODUCTION

Instructional supervision helps shape classroom practice through preparation, observation, analysis, and better planning (DiPaola & Hoy, 2018). According to Starratt and Sergiovanni (2016), instructional supervision helps teachers make better classroom decisions and rationalize difficulties. Instructors said some instructional supervisors used classroom observations to show teachers' flaws. Despite principals' responsibility to oversee teachers' performance, Wanzare (2012) found that secondary schools in Kenya used atop instructional supervision to correct teachers who were doing things wrong and did not use classroom observations. Kamindo (2018) found several, varied, and sometimes contradictory interpretations of instructional supervision in the literature. Different instances have different foci, aims, and behaviours. Principals must be competent to achieve instructional supervision goals since supervision's value depends on their competencies as supervisors. The strategies and talents of studied principals as instructional administrators may improve teaching and student achievement. There are several methods of instructional supervision, but the main ones focus on analyzing and evaluating student performance to provide honest feedback (Glickman et al., 2019). Leaders use focused instructional strategies to improve teachers' styles. These strategies improve instructors' abilities to improve instruction and academic success (Pajak, 2016). Wahlstrom and Louis (2018) suggest principals prioritize classroom visits and teacher development.

The principal's casual drop-in visit might be used to learn about teachers' jobs. Providing classroom education is one of school administrators' biggest challenges. Leaders must give instructors detailed, practical feedback to improve student coaching (Wahlstrom & Louis, 2018). School principals use direct teaching practices such brief classroom observations and instructional supervisions with pre- and post-observation conferences (Murphy, 2013). Both the instructor and administrator must be in the classroom for instructional oversight. Administrators must attend pre- and post-class meetings and observe the entire class. Instructional oversight lets the principal evaluate a lesson. School administrator and instructor discuss lessons to be taught while administrator watches. After observing the lesson, the school administration will meet with the instructor to review it. This likely indicates good student outcomes. Administrators must attend pre- and post-class meetings and observe the entire class. The principal can thoroughly review a lesson with instructional monitoring through:

Pre-observation: During pre-observation conferences, principals engage in discussions pertaining to both lesson planning and the observational focus of the forthcoming class. It is apparent that supervisors who engage in pre-observation conferences possess a comprehension of these conferences, so confirming the argument made by Nolan and Hoover (2011) that enhancing lesson planning clarity and comprehending instructors' instructional decision-making are two primary objectives of such conferences for teachers. Consequently, effective principals utilize pre-observation conferences to ensure that instructors have a clear understanding of the objectives of lesson simplicity, including the systematic approaches employed in the development of lesson aims, rather than evading them.

Observation: Observation is often regarded as a valuable tool for gaining insights into the dynamics of the classroom, so facilitating the cultivation of effective teaching methodologies and the establishment of rigorous standards. As stated by Murphy (2013), the utilization of classroom observations offers supervisors an opportunity to assess instructors' proficiency in classroom management and other pedagogical competencies, hence aiding in the identification of their areas of expertise and areas for improvement. Furthermore, as part of their commitment to improving instructional approaches, educators have the opportunity to get valuable feedback through constructive criticism. An effective supervisor fosters professional development via the practice of supervision, hence facilitating the implementation of instructors' innovative ideas and efforts. The active participation of principals in instructional monitoring is of paramount importance. According to Sergiovanni (2019), principals possess the ability to observe and monitor both the instructional practices employed by teachers and the learning activities undertaken by students. Nevertheless, it is expected that the administration will provide education to the instructor, who will then impart knowledge to the students. Principals engage in the supervision of teachers by doing classroom visits, collecting data on instructional practices, and then engaging in feedback sessions with educators. These activities are carried out in conjunction with the coordination of teachers' needs and professional development opportunities (Zepeda, 2012). During the period of active instruction, it is customary for the principal to make periodic visits to oversee, observe, and evaluate the pedagogical methods employed by the educators in order to enhance student achievement.

The principal has the authority to evaluate and analyses the observed instruction, taking into consideration both the strengths and weaknesses, as well as the overall classroom dynamics. Data is collected that pertains to the objective of the lesson and monitors the various instructional approaches employed by the instructor to initiate and conclude the session. According to Milanowski et al. (2016), the principal also engages in the observation of teacher-student interactions in order to identify any recurring patterns related to student engagement and absence during the instructional session. Additionally, the principal ensures that the allocated instructional time is adequate for facilitating effective learning.

The educator utilizes many techniques during the process of observing the classroom in order to enhance student engagement and responsiveness. In the educational setting, students engage in a dual role as both learners and instructors. They assume the responsibility of instructing their peers and the teacher by sharing their own opinions and beliefs. Simultaneously, they actively seek clarification on topics that they find challenging or do not fully comprehend. By facilitating student-led discussions in various group sizes, teachers can assume the role of instructional supervisors, aiding

educators in comprehending appropriate classroom conduct, meeting student needs, and fostering dialogue and deliberation during instructional sessions. Educators can employ instructional supervision as a framework to reflect about their pedagogical methodologies, while observers can glean insights from their peers. According to Massey (2014), educators and school administrators have the ability to enhance academic expectations for individual students as well as the entire student population through careful observation and assessment**.**

Post-observation: In order to improve the quality of education, it is important to carry out systematic observations inside a classroom setting. Principals emphasize their engagement in the oversight of classroom organization strategies subsequent to observations. They acknowledge that instructors' aptitude in effectively overseeing student activities serves as a significant indicator, enabling them to make informed assessments regarding the quality of teaching (Henson, 2010). Furthermore, scholarly investigations have unveiled a significant concept pertaining to supervision, specifically its utilization in post-observation conferences. The conferences commence with administrators requesting teachers to engage in introspection regarding the interconnectedness of teaching and learning. This is followed by a sequence of reflective inquiries and structured responses in the form of icebreaker questions. Zepeda (2012) conducted a study.

It is vital to bear in mind that feedback derived from an evaluation or profile might aid a teacher in comprehending the strengths and weaknesses from an external perspective. According to Cadigan (2016), when teachers are offered constructive criticism and suggestions for improvement, they have the potential to enhance the quality of instruction inside the classroom. According to Danielson and McGreal (2016), it is evident that good feedback should serve to reaffirm the qualities of teachers as instructors and foster reflection, so facilitating their development as self-directed leaders in their own learning. When preparing for the post-observation phase, principals should carefully review the particular objectives of the lesson, refrain from incorporating personal biases into their interpretation of the information, and develop conversation prompts to initiate the reflection process.

Methodology

This study employed a descriptive research design. A descriptive design is a data collection approach that comprises interviewing or sending questionnaires to a random sample of people (Orodho, 2003). It is used to collect data about people's thoughts, attitudes, and actions, as well as a variety of educational or societal issues (Orodho and Kombo, 2002). The survey's goals are to characterize the existing situation, provide benchmarks against which the current situation may be compared, and study any potential links between occurrences (Creswell, 2003). According to Cohen, Manion, and Morrisson (2000), research entails gathering information and using questionnaires to respond to inquiries about the issue being investigated. According to Creswell (2003), data can be collected from groups of respondents using both questionnaires and interviews. The research design was used because it allowed for generalizations from a sample to a population, allowing for assumptions about some population features.

The study was carried out in the Bungoma North Sub-County in Kenya's Western region. Bungoma County shared borders with three other counties: Trans Nzoia to the north, Kakamega to the south, and Busia to the west. It also shares a long international boundary with Uganda. There are 45 wards in the County Assembly. Kanduyi, Bumula, Webuye East, Webuye West, Kabuchai, Sirisia, Tongaren, Kimilili, and Mt. Elgon were the nine constituencies. They also serve as Sub-Counties. Bungoma County's economic backbone is agriculture, which includes sugarcane, tobacco, coffee, onions, vegetables, sunflower, and dairy animals. The county is a big contributor to the breadbasket of the region. The researcher chose this site because it provides better information on principals' teaching practices in a large number of secondary schools.

As stated by Creswell (2012), the target population refers to a collective of individuals or organizations that possess identifiable and general features, hence rendering them suitable subjects for research analysis. Hence, the study encompassed the entire population of instructors, students, and principals inside the six public secondary schools situated in Bungoma North Sub County. A total of 2,215 individuals were subjected to investigation, comprising 2,125 students, 84 teachers, and 6 principals.

Table 1: Target Population

Category	Target Population
Principals	6
Teachers	84
Students	2125
Total	2215

Source: Quality Assurance and Standards Office (Bungoma County2022).

According to Macmillan (2004), a sample refers to a compilation of things or a solitary piece from which data is obtained. According to the research conducted by Wiersema (2009), it is imperative to have an adequate sample size in order to establish the credibility and consistency of the collected data. There was a total of six publicly-funded secondary schools, with a solitary privately-funded educational institution. The public secondary school system consisted of three coeducational day schools, two boarding schools for boys, and one boarding school for girls. This study showcased the contrasting characteristics of the schools, although all of them were able to offer relevant insights into the instructional leadership practices of principals and their impact on students' academic performance in the Kenya Certificate of

Secondary Education (KCSE) examination. The sample size for the experiment was determined using the Kejcie and Morgan (1970) table. The target population consisted of 2215 individuals, from which a sample size of 331 responses was obtained, representing all six public secondary schools.

Kerlinger (1998) posits that sampling techniques refer to the researcher's methodology for selecting a sample. The researchers applied a cluster random sampling technique to select students from the six schools. Subsequently, a random sampling method was utilized to choose students inside each individual school. The utilization of the aforementioned sample technique served the objective of providing researchers with the opportunity to obtain the desired representation of all groups. In contrast, the selection of instructors was conducted by a census method, while the selection of principals was deliberately made for the purpose of this research. A census refers to the systematic gathering of data from every individual or unit within a given population, often referred to as a comprehensive enumeration of the population.

Table 2: Sample size

Category	Target Population	Sample Size
Principals	6	6
Teachers	84	84
Students	2125	241
Total	2215	331

Source (Researcher, 2023)

The study employed both qualitative and quantitative data collection approaches. These two strategies have contributed significantly to the enrichment of data analysis. The primary methodologies employed for data collection encompassed the utilization of questionnaires and interview schedules. The utilization of a questionnaire is deemed suitable in this study as it enables the researcher to gather data from a substantial sample size (Kendall, 2008). Kothari (2014) asserts that oral-verbal stimuli are delivered to respondents during the course of the interview, and their responses are provided verbally. This strategy can be implemented by incorporating individual discussions and, if feasible, cellular phone conversations. The researcher utilized the personal interview methodology and engaged in direct, in-person conversations with the principals during the interview process. This particular approach was most appropriate for conducting comprehensive and thorough investigations. The interviews were organized in a manner where a pre-established list of questions was utilized. Consequently, the researcher conducted individual interviews and followed a rigorous methodology, systematically posing questions to each participant in a specified sequence.

Validity refers to the extent to which the results obtained through data analysis accurately indicate the phenomenon under investigation (Mugenda and Mugenda ,1999). The researcher evaluated the content validity of the instrument by examining its objectives, topic matter, and level of complexity. Face validity refers to the initial, subjective assessment of the extent to which a measurement technique employed in a study appears to accurately measure a specific variable. The research tools were ensured to possess face and content validity through expert evaluation who are proficient in research procedures within the field of educational leadership and management. According to Anikweze (2009), the inclusion of expert opinion in the assessment process might enhance the dependability of an instrument by providing a clear and explicit definition of validity. The assessment of the test item's ability to sample the intended content was contingent upon the domain within which the contents were believed to be situated.

Reliability testing was conducted to assess the consistency of the output produced by the research equipment. According to Macmillan (2004), a measuring device is deemed dependable if it consistently produces repeated results. According to Macmillan (2004), a highly reliable measure has minor inaccuracies in its outputs, while a measure with low reliability is characterized by considerable errors. There are three fundamental approaches utilized to assess reliability, namely test-retest, test-split, and equivalent-form. The calculations were obtained using a dependability coefficient, a correlation statistic ranging from 0.00 to 0.99. Strong dependability was indicated by a high correlation coefficient, such as 0.78 or 0.85. Correlation coefficients below 0.60 frequently served as a reliable indicator of low reliability. The present study employed the split-half method, wherein a single group of participants received the instrument simultaneously. In order to do this, the questionnaire items were divided into two segments, and a single group of participants was employed concurrently. Subsequently, the scores were computed in order to determine the correlation between the scores of the two components. According to Macmillan (2004), the utilization of test re-test or equivalent form methods effectively mitigates the influence of chance errors resulting from variations in test conditions. The reliability of the data was subsequently assessed using Cronbach's Alpha Coefficient. The reliability of the two surveys instrument was deemed satisfactory, as evidenced by Cronbach's alpha coefficients of 0.79 and 0.78 for teachers and students, respectively.

The quantitative data collected from the participants was processed and analysed using the Statistical Package for Social Sciences (SPSS) in order to present the findings in a comprehensible manner. The research inquiries served as the foundation for conducting an analysis of both quantitative and qualitative data. The data pieces were inspected prior to coding in order to make necessary amendments to the data recorded on the questionnaires. The methodology facilitated the identification of erroneous responses, spelling errors, and instances where respondents left sections blank. The data was subsequently encoded to facilitate its input into the computer system for the purpose of conducting statistical analysis. The study employed narrative and thematic approaches to convey qualitative data obtained from open-ended questionnaire inquiries, as indicated by the research inquiries. The importance of data analysis lies in its ability to effectively elucidate

prominent characteristics and offer insightful interpretations, hence facilitating the process of describing and formulating generalisations based on research findings. Creswell (2009) is a scholarly source that can be referenced in academic discussions or research. Descriptive statistics, such as frequency tables and percentages, were utilised to characterise the data. The data employed in the generation of a report encompassed several findings, which were subsequently utilised to formulate conclusions and provide avenues for further investigation.

Results

The research utilized both descriptive and inferential statistical analyses. This study aimed to examine the impact of instructional supervision on academic attainment in the Kenya Certificate of Secondary Education (KCSE) in Bungoma North Sub-County, Kenya. Descriptive statistics, including frequency, percentage, and mean distribution, were computed to analyses the level of agreement on a five-point Likert scale pertaining to the variable of instructional supervision.

Table 3: Descriptive statistics for teachers' responses on the influence of instructional supervision (pre-observation) on academic achievement in KCSE.

Statements		SD	D	U	A	SA	MEAN
Creates constructive connection with the teachers overseen and allows exchange of information about classroom methods.	F	9	4	5	32	28	3.85
	%	11.5	5.1	6.4	41.0	35.9	
Acquainted with the instructional tactics teachers intends to employ during lessons.	F	1	11	4	32	30	4.01
	%	1.3	14.1	5.1	41.0	38.5	
Debates on how teachers intend to meet the students' diverse learning capacities, as well as the classroom management method that will be, used	F	2	2	13	24	37	4.18
	%	2.6	2.6	16.7	30.8	47.4	
Recognizes what form of evaluations teachers use to determine whether the course goals are, reached.	F	2	8	4	23	41	4.19
	%	2.6	10.3	5.1	29.5	52.6	
Determines with the teachers on what data is to be, gathered for measuring specific areas of focus.	F	2	6	5	25	40	4.22
	%	2.6	7.7	6.4	32.1	51.3	

Source: Field Data, 2023

According to the data presented in Table 7, it can be observed that a total of 32 respondents, accounting for 41.0% of the sample, expressed agreement with the notion that their principal fostered positive relationships with the supervised teachers and facilitated the exchange of information regarding classroom methodologies. Additionally, 28 respondents (35.9%) strongly agreed with this statement, while 9 respondents (11.5%) strongly disagreed. A smaller proportion of respondents, 5 (6.4%), remained undecided, and 4 (5.1%) expressed disagreement with the statement. According to the results of the study, it was observed that the participants generally exhibited agreement (Mean=3.85) about the establishment of a positive rapport between the principals and the supervised instructors, as well as the facilitation of information exchange pertaining to classroom methodologies. This assertion was substantiated by an individual who was interviewed and expressed the following viewpoint;

"…Principals communicate openly, care about teachers' professional advancement, participate in school events, prioritize their well-being, and are great relationship builders. The goal is to improve academic achievement.…" Female Participant, 57 years, Principal.

This suggests that principals establish positive relationships with the instructors they supervise, fostering an environment conducive to the sharing of information regarding classroom methodologies. Furthermore, a total of 32 respondents, accounting for 41.0% of the sample, expressed agreement with the assertion that their principal possessed familiarity with the instructional strategies that teachers intended to implement during their lessons. Additionally, 30 respondents, constituting 38.5% of the sample, strongly agreed with this statement. Conversely, 11 respondents (14.1%) disagreed, while 4 respondents (5.1%) remained undecided. Only 1 respondent (1.3%) strongly disagreed with the statement. Based on the findings of the study, it was determined that the participants expressed a consensus (Mean=4.01) about their principal's familiarity with the instructional strategies that teachers intended to utilize during their sessions. This suggests that principals possess knowledge of the instructional strategies that teachers plan to utilize during their lessons. This finding aligns with the research conducted by Nolan and Hoover (2011), which suggests that effective principals utilize pre-observation conferences as a means to ensure that teachers have a clear understanding of the objectives of the class, including the systematic approaches employed in developing these objectives, rather than neglecting them.

In a similar vein, it was found that 37 respondents, accounting for 47.4% of the total, expressed strong agreement with the notion that their principal engaged in discussions regarding teachers' strategies for addressing the diverse learning needs of students, as well as the methods employed for managing the classroom. Additionally, 24 respondents (30.8%) agreed, 13 (16.7%) remained undecided, while 2 (2.6%) strongly disagreed and another 2 (2.6%) simply disagreed with the aforementioned statement. According to the study's findings, it was indicated that the participants exhibited agreement (Mean=4.18) about the principal's involvement in discussions pertaining to instructors' strategies for addressing the varied learning abilities of children, as well as the approach to be employed for classroom management. This assertion was substantiated by an individual who was interviewed and expressed the following viewpoint;

"*… Principals ask instructors to argue from opposing viewpoints to refute each other. This helps build methods to overcome obstacles and boost school success.…"* Female Participant, 45 years, Principal.

This suggests that principals engage in discussions regarding teachers' strategies for addressing the different learning needs of kids, as well as the approach to classroom management that will be employed. Regarding the extent to which the

principal acknowledged the specific assessment methods employed by instructors to assess the achievement of course objectives, it was found that 41 respondents (52.6%) strongly agreed, 23 respondents (29.5%) agreed, 8 respondents (10.3%) disagreed, 4 respondents (5.1%) were undecided, and 2 respondents (2.6%) severely disagreed with this assertion. The findings of the survey indicate that the participants expressed a consensus (Mean=4.19) on their principal's awareness of the specific types of assessments employed by teachers to assess the achievement of course objectives. This suggests that principals possess an understanding of the specific evaluation methods employed by teachers in assessing the achievement of course objectives.

In conclusion, a majority of the respondents, specifically 40 individuals or 51.3%, expressed strong agreement with the notion that their principal collaborated with teachers to determine the data to be collected for assessing specific areas of emphasis. Additionally, 25 respondents or 32.1% agreed, while 6 individuals or 7.7% disagreed. Furthermore, 5 respondents or 6.4% were undecided, and 2 individuals or 2.6% strongly disagreed with the statement. The findings of the survey revealed that the participants were in consensus (Mean=4.22) regarding the collaborative decision-making process between principals and teachers in determining the data collection methods for assessing certain areas of emphasis. This suggests that principals collaborate with teachers to select the data that should be collected in order to measure certain areas of attention.

Table 5: Descriptive statistics for teachers' responses on the influence of instructional supervision (Observation) on academic achievement in KCSE.

Statements		SD	D	U	A	SA	MEAN
Visit classrooms while teaching is taking place to monitor teaching and learning.	F	11	5	3	27	32	3.82
	%	14.1	6.4	3.8	34.6	41.0	
Evaluates instructors' teaching techniques with the goal of increasing grades	F	4	8	4	26	36	4.05
	%	5.1	10.3	5.1	33.3	46.2	
Appraises as well as documents the merits alongside weaknesses of the perceived instruction as well as what is going on in the classroom.	F	3	2	6	22	45	4.33
	%	3.8	2.6	7.7	28.2	57.7	
Collect data, which address the lesson's aim, and tracks the various instructional tactics used at the beginning and ending of the session.	F	1	8	2	30	37	4.21
	%	1.3	10.3	2.6	38.5	47.4	
Record interactions with teachers and students to look for trends of student participation and non-involvement during the class.	F	1	11	4	32	30	4.01
	%	1.3	14.1	5.1	41.0	38.5	

According to the data presented in Table 5, a significant proportion of the respondents, specifically 32 individuals (equivalent to 41.0% of the total), expressed strong agreement with the notion that their principle actively observes teaching and learning activities by visiting classrooms. Additionally, 27 respondents (34.6%) indicated agreement, while 11 individuals (14.1%) strongly disagreed, 5 individuals (6.4%) disagreed, and 3 individuals (3.8%) remained unsure on this statement. According to the study's findings, it was observed that the respondents generally exhibited agreement (Mean=3.82) on the occurrence of classroom visits by their principal during instructional sessions, with the purpose of monitoring the teaching and learning process. This assertion was corroborated by an individual who was interviewed and expressed the following perspective;

"... Principals must observe a classroom to assess its teaching and learning quality. Poor performance occurs when the principal does not visit the classroom ..." Male Participant, 51 years, Principal.

Principals observe teaching and learning in classrooms. According to Louis (2018), principals must prioritize classroom visits and teacher development. Additionally, 36(46.2%) highly agreed that their principal reviewed instructors' teaching tactics to increase grades, 26(33.3%) agreed, 8(10.3%) disagreed, 4(5.1%) were undecided, and 4(5.1%) definitely disagreed. The survey found that respondents (Mean=4.05) agreed that their principal reviewed teachers' teaching methods to boost grades. This means that principals examine teachers' methods to improve grades. This supports Massey (2014)'s findings that teachers can use instructional supervision to reflect on their teaching methods and observers can learn from others.

Similarly, a significant proportion of the participants, namely 45 individuals, or 57.7% of the total answers, expressed a strong agreement with the assertion that their principal effectively evaluated and recorded both the strengths and weaknesses of the observed instruction, as well as the ongoing activities within the classroom. Out of the total sample size, 22 individuals (28.2%) expressed agreement, 6 individuals (7.7%) remained uncertain, 3 individuals (3.8%) strongly disagreed, and 2 individuals (2.6%) disagreed with the given statement. According to the study findings, it was observed that the respondents expressed agreement (Mean=4.33) on the principal's ability to effectively evaluate and document both the strengths and flaws of the perceived instruction, as well as the activities taking place within the classroom. This suggests that principals evaluate and record both the strengths and faults of the observed instruction and classroom activities.

Regarding the inquiry into whether the principal gathered data that pertained to the objective of the lesson and monitored the different instructional strategies employed at the commencement and conclusion of the session, it was found that 37

respondents (equivalent to 47.4% of the total) strongly agreed, 30 respondents (equivalent to 38.5% of the total) agreed, 8 respondents (equivalent to 10.3% of the total) disagreed, 2 respondents (equivalent to 2.6% of the total) were undecided, and 1 respondent (equivalent to 1.3% of the total) strongly disagreed with the aforementioned statement. The findings of the study indicate that the participants expressed agreement (Mean=4.21) about their principal's collection of data pertaining to the lesson's objective, as well as their monitoring of the different instructional strategies employed at the commencement and conclusion of the session. This assertion was substantiated by an individual who participated in an interview and expressed the following viewpoint;

"… Students' lesson notes, graded assignments, and exam papers indicate what teachers have done, but checking teachers' records does not guarantee coverage. The principal checks most lecture notes, assignments, and exams, improving pupils' academic achievement…" Female Participant, 45 years, Principal.

This suggests that principals gather data pertaining to the lesson's objective and monitor the different teaching strategies employed at the commencement and conclusion of the session.

In conclusion, a total of 32 respondents, accounting for 41.0% of the sample, expressed agreement with the notion that their principal documented interactions with teachers and students in order to identify patterns of student engagement and disengagement during class. Additionally, 30 respondents, representing 38.5% of the sample, strongly agreed with this statement. Conversely, 11 respondents (14.1%) disagreed, while 4 respondents (5.1%) remained undecided. Only 1 respondent (1.3%) strongly disagreed with the statement. The findings of the survey revealed that the participants expressed a consensus (Mean=4.01) with their principal's practice of documenting interactions with instructors and students in order to identify patterns of student engagement and disengagement throughout class. This suggests that school leaders document their observations of interactions between teachers and students in order to identify patterns of student engagement and disengagement inside the classroom. This aligns with the research conducted by Milanowski et al. (2016), which suggests that principals monitor teacher-student interactions to identify patterns of student engagement and absence during educational sessions. Additionally, principals ensure that the allocated instructional time is adequate for facilitating effective learning.

Table 6: Descriptive statistics for teachers' responses on the influence of instructional supervision (post-observation) on academic achievement in KCSE

Statements		SD	D	U	A	SA	MEAN
Prior to meeting with the teacher, analyzes the teaching procedure.	F	7	5	8	27	31	3.90
	%	9.0	6.4	10.3	34.6	39.7	
Converses with the teachers on how to improve their performance and on how to enhance their teaching.	F	5	10	7	26	30	3.85
	%	6.4	12.8	9.0	33.3	38.5	
Involves in productive critique of the teaching and learning processes with the instructor to improve student accomplishment.	F	1	3	11	25	38	4.23
	%	1.3	3.8	14.1	32.1	48.7	
Provides accurate statistics to the instructor for self-analysis as well as reflections basing on the data.	F	1	7	2	35	33	4.18
	%	1.3	9.0	2.6	44.9	42.3	
Inspires teachers towards learning new skills alongside aiding amid inevitable difficulties.	F	4	7	2	35	30	4.03
	%	5.1	9.0	2.6	44.9	38.5	

According to the data shown in Table 6, it can be observed that a significant proportion of respondents, specifically 31 individuals (equivalent to 39.7% of the total), expressed strong agreement with the assertion that their principal conducted an analysis of the teaching technique prior to meeting with the instructor. Additionally, 27 respondents (34.6%) indicated agreement, while 8 individuals (10.3%) remained unsure. On the other hand, a smaller number of participants, specifically 7 individuals (9.0%), strongly disagreed with the statement, and 5 respondents (6.4%) expressed disagreement. According to the study findings, it was observed that the respondents had a tendency to concur (Mean=3.90) with the notion that their principle engaged in an analysis of the teaching technique prior to meeting with the teacher. This assertion was substantiated by an individual who participated in an interview, and their statement is as follows;

"… Principals evaluate teaching methods and classroom management to identify strengths and flaws and provide teachers early opportunities to improve. This may improve academic achievement.…" Male Participant, 46 years, Principal.

This suggests that principals engage in an analysis of the teaching technique prior to their meeting with the teacher.

Furthermore, a total of 30 respondents, accounting for 38.5% of the sample, expressed strong agreement with the assertion that their principal engaged in discussions with teachers regarding strategies to enhance their performance and improve their teaching. Additionally, 26 respondents, constituting 33.3% of the sample, agreed with the statement. Conversely, 10 respondents (12.8%) disagreed, while 7 respondents (9.0%) remained undecided. Lastly, 5 respondents (6.4%) strongly disagreed with the statement. Based on the findings of the study, it was observed that the participants exhibited a tendency towards agreement (Mean=3.85) on the engagement of their principal in discussions with instructors pertaining to strategies for enhancing their performance and improving their teaching methodologies. This suggests that principals engage in dialogue with teachers regarding strategies to boost their instructional effectiveness and improve their overall performance.

In a similar vein, it was found that 38 respondents, accounting for 48.7% of the total, expressed strong agreement with the notion that their principal actively engaged in constructive criticism of the teaching and learning processes alongside instructors in order to enhance student achievement. Additionally, 25 respondents (32.1%) agreed with this statement, while 11 respondents (14.1%) remained undecided. On the other hand, a small proportion of respondents, specifically 3 (3.8%), strongly disagreed, and 1 (1.3%) expressed disagreement with the aforementioned statement. According to the study's findings, it was observed that the respondents exhibited agreement (Mean=4.23) about the involvement of their principal in constructive criticism of the teaching and learning processes, in collaboration with the instructor, with the aim of enhancing student achievement. This suggests that principals engage in constructive evaluation of the instructional and learning procedures alongside the instructor, aiming to enhance student achievement. This aligns with the research conducted by Cadigan (2016), which suggests that when teachers receive constructive feedback and suggestions for enhancing their instructional practices, they have the potential to enhance their classroom instruction.

Regarding the accuracy of the statistics provided by principals to the instructor for the purpose of self-analysis and reflections derived from the data, out of the total number of respondents, 35 individuals, accounting for 44.9% of the sample, expressed agreement with the statement. Additionally, 33 respondents, constituting 42.3% of the sample, strongly agreed. On the other hand, 7 individuals, representing 9.0% of the sample, disagreed with the statement. Furthermore, 2 respondents, making up 2.6% of the sample, were undecided, while 1 individual, amounting to 1.3% of the sample, severely disagreed with the statement. The findings of the study indicate that the participants, on average, expressed agreement (Mean=4.18) with the notion that their principal effectively gave accurate statistical information to the instructor for the purpose of self-analysis and reflection based on the data. This assertion was substantiated by an individual who participated in an interview, expressing the following statement;

… Teachers can self-analyze using correct statistics from principals. Just as assessment helps students, precise statistics assist teachers understand if their teaching has been effective and ensuring students acquire what they need to satisfy course learning objectives.…*Male Participant, 51 years*, Principal.

This suggests that administrators furnish instructors with precise information for the sake of self-analysis, as well as encourage reflections grounded in the data. This finding aligns with the research conducted by Wanzare (2012), which suggests that instructional supervision practices and procedures in secondary schools in Kenya primarily focused on identifying and rectifying instructional errors made by teachers. However, classroom observations did not provide teachers with any form of assistance. It is expected that principals should support education by overseeing and evaluating teachers' performance.

In conclusion, a total of 35 respondents, accounting for 44.9% of the sample, expressed agreement with the assertion that their principal played a role in motivating teachers to acquire new skills while also providing support during challenging circumstances. Additionally, 30 respondents (38.5%) agreed with the statement, while 7 (9.0%) opposed, 4 (5.1%) severely disagreed, and 2 (2.6%) remained uncertain. The findings of the survey indicate that the participants expressed agreement (Mean=4.03) with the notion that their principle had a role in motivating teachers to acquire new abilities while also providing support during challenging circumstances. This suggests that principals serve as sources of inspiration for teachers, encouraging them to acquire new abilities while also providing support during unavoidable challenges. This aligns with the research conducted by Starratt and Sergiovanni (2016), which suggests that instructional supervision serves as a method for educators to enhance their knowledge and abilities in order to make informed instructional choices that effectively address classroom difficulties.

Table 7: Descriptive statistics for students' responses on the influence of instructional supervision on academic achievement in KCSE

Statements		SD	D	U	A	SA	MEAN
My principal is aware of the instructional tactics that the instructor intends to employ throughout the class.	F	33	15	8	68	103	3.85
	%	14.5	6.6	3.5	30.0	45.4	
My principal observes teaching and learning in my classrooms when they are in session for supervision.	F	16	22	12	73	104	4.00
	%	7.0	9.7	5.3	32.2	45.8	
My principal observes teacher-student interactions to identify patterns of student participation and non-involvement during the class.	F	12	21	10	83	101	4.06
	%	5.3	9.3	4.4	36.6	44.5	
My principal examines the classroom teaching process.	F	23	14	18	90	82	3.85
	%	10.1	6.2	7.9	39.6	36.1	
My principal consults with teachers on how to improve their outcomes and gives advice on how to enhance their teaching.	F	7	32	13	92	83	3.93
	%	3.1	14.1	5.7	40.5	36.6	
My principal encourages instructors to learn new skills to improve their performance.	F	9	22	12	67	117	4.15
	%	4.0	9.7	5.3	29.5	51.5	

According to the data presented in Table 7, a significant proportion of the respondents, specifically 103 individuals or 45.4% of the total, expressed strong agreement with the notion that their principal possessed knowledge of the instructional strategies that the teacher planned to implement during the course. Out of the total sample size, 68 individuals (30.0%) expressed agreement, 33 individuals (14.5%) strongly disagreed, 15 individuals (6.6%) disagreed, and 8 individuals (3.5%) were indecisive with regards to the given statement. According to the study's findings, it was observed that the

respondents exhibited a tendency to concur (Mean=3.85) with the notion that their principal possessed knowledge regarding the teaching strategies that the instructor intended to implement during the course. This suggests that principals possess knowledge regarding the teaching strategies that the instructor planned to implement during the course.

Furthermore, it was found that a total of 104 respondents, accounting for 45.8% of the sample, expressed strong agreement with the assertion that their principal actively monitored teaching and learning in their classrooms during supervision sessions. Additionally, 73 respondents (32.2%) agreed with this statement, while 22 (9.7%) opposed, 16 (7.0%) strongly disagreed, and 12 (5.3%) remained uncertain. Based on the findings of the study, it was determined that the participants expressed a consensus (Mean=4.00) on the fact that their principal actively monitored teaching and learning activities in their classrooms during supervision sessions. This suggests that principals engage in the practice of classroom observation during instructional sessions for the purpose of oversight. This finding aligns with the research conducted by Zepeda (2012), which suggests that during teaching periods, principals may engage in supervisory activities to observe, evaluate, and analyses the instructional approaches employed by teachers in order to enhance student achievement.

In a similar vein, it was found that 101 respondents, accounting for 44.5% of the total, expressed strong agreement with the assertion that their principal actively monitored teacher-student interactions to discern patterns of student engagement and disengagement in the classroom. Additionally, 83 respondents (36.6%) agreed with this statement, while 21 (9.3%) disagreed, 12 (5.3%) strongly disagreed, and 10 (4.4%) remained undecided. According to the study's findings, it was shown that the participants expressed agreement (Mean=4.06) regarding the practice of their principal in observing teacher-student interactions as a means to discern patterns of student engagement and disengagement inside the classroom. This suggests that principals engage in the observation of teacher-student interactions in order to discern recurring patterns of student engagement and disengagement within the classroom. This aligns with the research conducted by Milanowski et al. (2016), which suggests that principals monitor teacher-student interactions to identify patterns of student engagement and absence during educational sessions. Furthermore, principals ensure that the allocated instructional time is adequate for facilitating effective learning.

Regarding the evaluation of the classroom teaching process by their principal, a total of 90 respondents (equivalent to 39.6% of the sample) expressed agreement, while 82 respondents (36.1%) strongly agreed. On the other hand, 23 respondents (10.1%) strongly disagreed, 18 respondents (7.9%) were undecided, and 14 respondents (6.2%) disagreed with the aforementioned statement. Based on the findings of the study, it was observed that the respondents had a tendency towards agreement (Mean=3.85) about the involvement of their principle in evaluating the classroom teaching process. This assertion was substantiated by an individual who participated in an interview and expressed the following viewpoint; *"…Instructional oversight, including classroom teaching process evaluation, boosts student achievement. A systematic approach to formative evaluation used by principals to assess student learning helps teachers improve student learning and classroom instruction …"* Male Participant, 54 years, Principal.

This suggests principals examine classroom instruction.

Moreover, 92 (40.5%) of respondents agreed that their principal advised instructors on how to improve their results and instruction. 83 (36.6%) strongly agreed, 32 (14.1%) disagreed, 13 (5.7%) were undecided, and 7 (3.1%) severely disagreed. The study found that respondents agreed (Mean=3.93) that their principal advised instructors on how to improve their results and instruction. This means principals advise instructors on how to improve their results and instruction.

Finally, 117 (51.5%) strongly agreed that their principal encouraged educators to learn new skills to boost performance. 67 (29.5%) agreed, 22 (9.7%) disagreed, 12 (5.3%) were undecided, and 9 (4.0%) severely disagreed. The study found that respondents (Mean=4.15) said their principle encouraged educators to learn new skills to improve. The following interviewee backed this;

"…Encouraging instructors to develop new skills through coaching, peer collaboration, meaningful evaluations, and recognizing them as trusted experts creates a healthy school culture with low turnover and high accomplishment. …" Male Participant, 44 years, Principal.

This suggests that school principals foster a culture of professional development among instructors, motivating them to acquire new abilities in order to enhance their performance.

The descriptive statistics for objective one was subsequently followed by a Chi-square test of association. The statistical analysis conducted using the Chi-square test at a significance level of $p < 0.05$ demonstrates a significant correlation between instructional supervision and academic achievement in the Kenya Certificate of Secondary Education (KCSE) in Bungoma North Sub-County, Kenya. The results of this analysis are presented in Table 8. In order to accomplish this objective, the following hypothesis was examined.

H_{01}: *There is no significant association between instructional supervision and academic achievement in KCSE in Bungoma North Sub-County, Kenya.*

Table 8: Chi-square test of association between instructional supervision and academic achievement in KCSE in Bungoma North Sub-County, Kenya

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	533.464[a]	132	.000
Likelihood Ratio	275.085	132	.000
Linear-by-Linear Association	94.806	1	.000
N of Valid Cases	305		

a. 152 cells (97.4%) have expected count less than 5. The minimum expected count is .01.

According to Table 8, the p value for classroom play was less than 0.05 (p=0.000). In light of this, the supposition that "there is no significant association between instructional supervision and academic achievement in KCSE in Bungoma North Sub-County, Kenya" was disproved. This suggests a statistically significant relationship between instructional supervision and academic achievement in the KCSE in Bungoma North Sub-County, Kenya.

Conclusion

The study established a statistically significant correlation between instructional supervision and academic achievement in the Kenya Certificate of Secondary Education (KCSE) examination. Hence, the enhancement of academic achievement in the Kenya Certificate of Secondary Education is contingent upon principals establishing positive relationships with teachers, facilitating the exchange of information regarding classroom methodologies, familiarizing themselves with the instructional strategies intended by teachers during lessons, engaging in discussions about how teachers plan to address the diverse learning capacities of students, acknowledging the assessment methods employed by teachers to gauge the attainment of course objectives, and collaborating with teachers to determine the data to be collected for measuring specific areas of emphasis.

Furthermore, the enhancement of academic achievement in the Kenya Certificate of Secondary Education is contingent upon the active involvement of school principals in the observation and evaluation of teaching and learning activities within their classrooms. This involvement encompasses various actions, such as appraising and collecting data that directly align with the objectives of the lesson, conducting a thorough analysis of the teaching methodology prior to engaging with the teacher, engaging in meaningful discussions with teachers to facilitate performance improvement, engaging in constructive critique of the teaching and learning processes with the instructor, providing accurate statistical information to the instructor for self-reflection and analysis, motivating teachers to acquire new skills and offering support in overcoming inevitable challenges, possessing knowledge of the instructional strategies intended to be employed by the instructor during the class, observing and assessing teacher-student interactions, consulting with teachers on strategies to enhance their outcomes, and offering guidance and advice as necessary.

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