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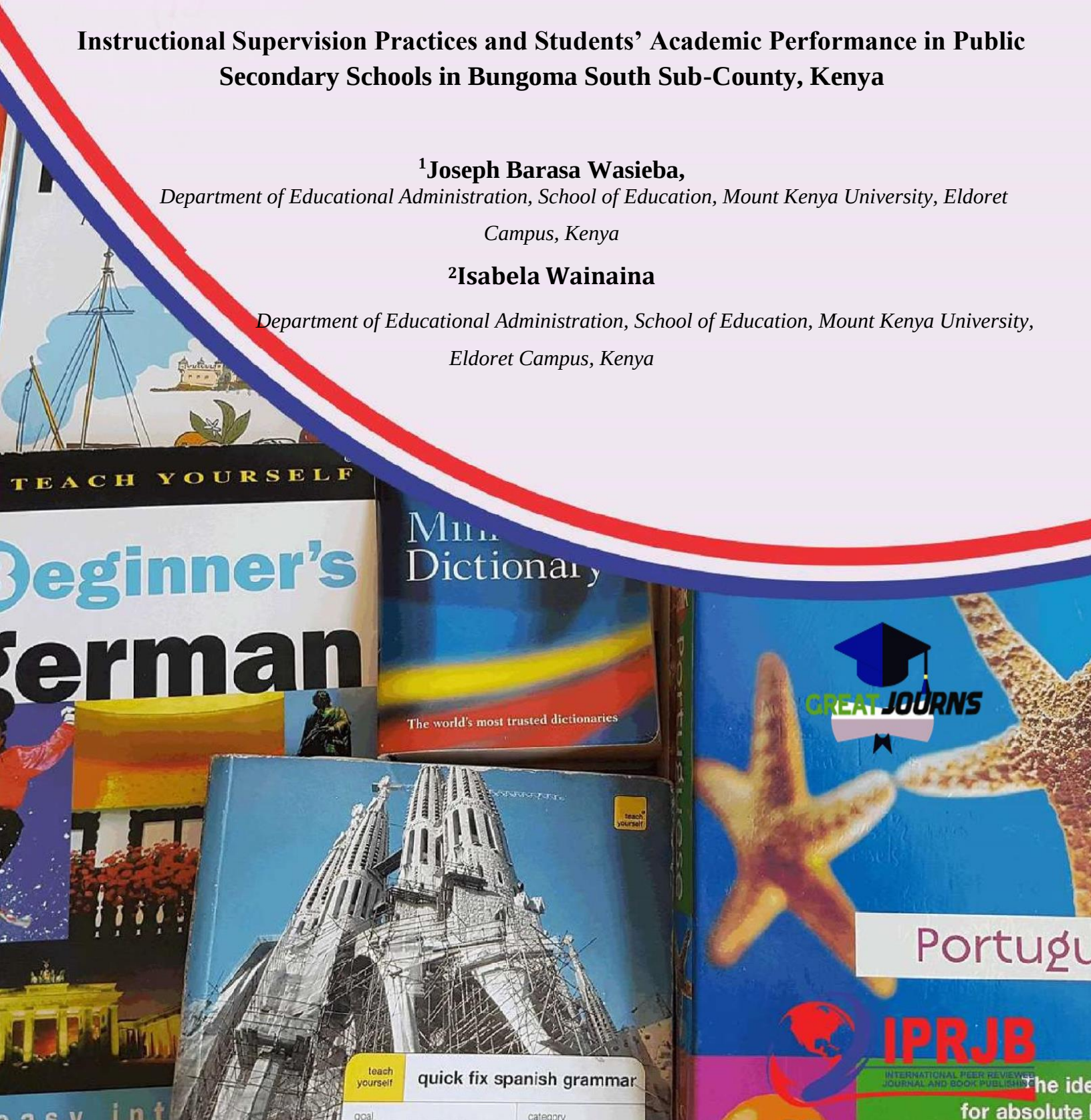
Instructional Supervision Practices and Students' Academic Performance in Public Secondary Schools in Bungoma South Sub-County, Kenya

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ABSTRACT

This study examined the influence of instructional supervision practices on students' academic performance in public secondary schools in Bungoma South Sub-County, Bungoma County, Kenya. Although school leadership has increasingly been recognised as central to improving learning outcomes, persistent variations in Kenya Certificate of Secondary Education (KCSE) performance in the sub-county raise questions about how effectively instructional supervision is practised and translated into improved learner achievement. Anchored on Instructional Leadership Theory, the study adopted a concurrent triangulation mixed-methods design targeting principals, deputy principals, teachers and students in the sub-county's 62 public secondary schools. Using Yamane's (1967) formula, a sample of 391 respondents was drawn through stratified, proportionate and purposive sampling, of whom 352 (90%) responded. Data were collected using questionnaires, interview guides, observation checklists and document analysis schedules, and analysed using descriptive statistics, Pearson correlation and multiple regression, complemented by thematic analysis of qualitative data. The instructional supervision scale returned a Cronbach's alpha of 0.812. Findings showed a strong, statistically significant positive relationship between instructional supervision practices and academic performance ($r = 0.693$, $p < 0.01$), and instructional supervision was a significant independent predictor of performance within a four-variable leadership model ($\beta = 0.342$, $t = 6.17$, $p < 0.001$). Qualitative evidence linked supervision to enhanced curriculum implementation and improved teacher professional support, though heavy administrative workloads constrained its frequency. The study concludes that instructional supervision is a strategic leadership function requiring sustained institutional prioritisation, and recommends structured classroom observation and feedback systems supported by reduced administrative burdens on school leaders.

Keywords: *instructional supervision; academic performance; school leadership; secondary schools; Bungoma; Kenya*

1. Introduction

1.1 Background of the Study

School leadership practices have increasingly been recognised as decisive determinants of academic performance in secondary schools, with contemporary research suggesting that differences in student achievement cannot be explained by resources and curriculum provision alone (Bush, 2020; Leithwood et al., 2021). Among the various dimensions of school leadership, instructional supervision – the process through which school leaders monitor, support and evaluate classroom instruction – has been singled out as one of the most direct mechanisms through which leadership translates into improved teaching and learning (Hallinger, 2020a). In high-performing education systems, instructional leaders who actively observe lessons, review professional records and provide structured feedback have been shown to strengthen teacher accountability and instructional consistency (OECD, 2022; Hattie, 2021).

Within Kenya, policy frameworks developed by the Ministry of Education and the Teachers Service Commission increasingly emphasise instructional supervision as a core leadership responsibility of principals and deputy principals (Teachers Service Commission, 2023). Despite these policy commitments, public secondary schools in Bungoma County continue to record uneven KCSE performance, and schools within Bungoma South Sub-County in particular have

consistently posted mean scores below the county and national averages (Bungoma South Sub-County Education Office, 2023). This persistent underperformance, occurring despite the existence of supervision frameworks, suggests either that instructional supervision is inconsistently implemented or that its specific influence on academic performance in this context has not been adequately established.

The educational realities observed across East Africa reinforce this picture: Kenya, Uganda and Tanzania have all invested considerably in reforms intended to strengthen instructional leadership, governance and accountability in schools, yet disparities in academic performance persist across schools and regions operating under broadly similar policy environments (Bush, 2020). Within Bungoma County specifically, public secondary schools continue to record varying levels of academic achievement despite operating under the same national curriculum, teacher management systems and supervisory frameworks, suggesting that differences in how instructional supervision is actually practised at the school level – rather than the mere existence of supervisory policy – may account for much of this variation.

Existing Kenyan studies have generally treated leadership as a fragmented or generalised construct, examining broad leadership styles rather than isolating specific practices such as instructional supervision, and have relied predominantly on descriptive approaches that cannot establish the magnitude of relationships between supervision and performance (Barasa & Wanyonyi, 2022; Simiyu, 2021). This study therefore isolates instructional supervision as a distinct leadership practice and empirically examines its influence on students' academic performance in public secondary schools in Bungoma South Sub-County.

1.2 Statement of the Problem

Despite continued policy reforms strengthening instructional leadership frameworks and performance-based accountability systems, public secondary schools in Bungoma South Sub-County continue to record academic performance below county and national KCSE averages (Bungoma South Sub-County Education Office, 2023). While international and regional evidence broadly associates effective instructional supervision with improved teaching quality and learner achievement, most Kenyan studies have examined school leadership as a generalised construct or relied on descriptive designs that do not establish the strength and direction of the relationship between specific supervisory practices and measurable academic outcomes (Barasa & Wanyonyi, 2022). Consequently, limited empirical evidence exists explaining the extent to which instructional supervision, specifically, accounts for variations in academic performance within underperforming sub-counties such as Bungoma South. This study addresses this gap by determining the influence of instructional supervision practices on students' academic performance in public secondary schools in the sub-county.

1.3 Purpose and Objective of the Study

This article reports findings from a broader study on integrated school leadership practices and academic performance, focusing specifically on the study's first objective: to determine the influence of instructional supervision practices on students' academic performance in public

secondary schools in Bungoma South Sub-County, Bungoma County, Kenya. The corresponding research question asked: What is the influence of instructional supervision practices on students' academic performance in public secondary schools in Bungoma South Sub-County? The study was guided by the null hypothesis that instructional supervision practices have no statistically significant influence on students' academic performance in public secondary schools in Bungoma South Sub-County.

1.4 Significance of the Study

The findings are expected to help principals and deputy principals strengthen classroom observation and feedback systems, guide the Teachers Service Commission and Ministry of Education in designing instructional leadership training and workload policies, and inform Boards of Management on supervision-related accountability structures. The study also contributes context-specific empirical evidence to the literature on instructional supervision in rural Kenyan secondary schools.

2. Literature Review

2.1 Empirical Review

A substantial body of literature associates instructional supervision with improved academic performance through enhanced teaching effectiveness, curriculum implementation and teacher accountability (Zepeda, 2021). Global studies attribute gains in learner achievement to structured classroom observation, monitoring of lesson delivery and the provision of professional feedback (OECD, 2022, 2023; UNESCO, 2023; Hallinger, 2020a; Leithwood et al., 2021). Within Kenya, local studies similarly report positive associations between supervisory practices and KCSE performance, although they differ on which specific dimensions of supervision matter most: Barasa and Wanyonyi (2022) emphasise the quality of feedback and follow-up support, while Simiyu (2021) attributes improved outcomes primarily to continuous monitoring and follow-up systems.

Despite this general consensus, three gaps are evident. Methodologically, most studies rely on descriptive survey designs and self-reported perception data, limiting their ability to establish the direction and magnitude of the relationship between supervision and performance. Conceptually, instructional supervision is often treated as an undifferentiated construct, with limited disaggregation of dimensions such as classroom observation, lesson plan review, feedback provision and follow-up. Contextually, much of the Kenyan evidence originates from urban or county-wide settings, leaving limited evidence specific to rural, underperforming sub-counties such as Bungoma South. This study addresses these gaps by empirically quantifying the strength of the relationship between instructional supervision and academic performance within this specific context, while triangulating quantitative results with qualitative evidence from principals and deputy principals.

2.2 Theoretical Framework

The study was anchored on Instructional Leadership Theory (Hallinger & Murphy, 1985; Hallinger, 2020a), which positions the direct improvement of teaching and learning as the central function of school leadership. The theory emphasises curriculum management, instructional supervision, assessment monitoring and teacher professional development as core leadership responsibilities, and empirical evidence consistently links structured classroom observation, feedback and follow-up to improved instructional quality and learner achievement (Hallinger, 2021; Pont et al., 2021).

Instructional Leadership Theory provides a direct theoretical basis for this study's focus on instructional supervision: classroom observation, feedback mechanisms, supervision frequency and follow-up processes are conceptualised as the specific practices through which school leaders shape teaching effectiveness and, ultimately, student performance. This proposition – that leaders who actively engage with instructional processes produce stronger learning outcomes than those confined to administrative management – directly informs the study's hypothesis that instructional supervision significantly influences academic performance. The theory has, however, been criticised as largely task-oriented, underemphasising the human and motivational dimensions of leadership such as teacher morale and school culture (Hallinger, 2020b). In contexts where teachers already face heavy workloads, compliance-driven supervision alone may generate limited returns unless complemented by supportive, developmental approaches – a consideration that informed this study's attention to the quality, and not merely the frequency, of supervisory feedback.

2.3 Conceptual Framework

Consistent with Instructional Leadership Theory, the study conceptualised instructional supervision practices as an independent variable influencing the quality of teaching and curriculum implementation through activities such as classroom observation, lesson plan review, feedback provision and supervision follow-up. These supervisory activities were conceptualised as operating on academic performance – measured as the three-year average KCSE mean score – both directly, by improving the consistency and quality of classroom instruction, and indirectly, by strengthening teacher accountability and professional practice over time. Government policy and regulatory frameworks, including Ministry of Education and Teachers Service Commission guidelines on supervision, were treated as an intervening influence shaping how consistently instructional supervision could be implemented at the school level. This framework guided both the design of the research instruments and the interpretation of the quantitative and qualitative findings reported in this article.

3. Methodology

3.1 Research Design and Study Area

The study adopted a mixed-methods research approach using a Concurrent Triangulation (Convergent Parallel) Design, combining a descriptive-correlational quantitative strand with a qualitative strand comprising interviews and document analysis. This design enabled statistical

determination of the strength and direction of the relationship between instructional supervision and academic performance, while qualitative evidence from principals, deputy principals and education officers provided contextual explanation of the quantitative results. The study was conducted in public secondary schools in Bungoma South Sub-County, Bungoma County, Kenya, across the Municipality, Sang'alo and Mwibale educational zones.

3.2 Target Population and Sample

The target population comprised 62 principals, 62 deputy principals, 1,230 teachers and 7,600 students drawn from the sub-county's 62 public secondary schools (Ministry of Education, Bungoma South Sub-County Education Office, 2025), yielding a total population of 8,954 (Table 1). Using Yamane's (1967) formula at a 5% precision level, a minimum sample of 383 was computed; after proportionate rounding across strata, a final operational sample of 391 respondents (19 principals, 19 deputy principals, 93 teachers and 260 students) was drawn from 19 schools using stratified, proportionate, simple random and purposive sampling techniques.

Table 1: Target Population by Educational Zone

Zone	Schools	Principals	Deputy Principals	Teachers	Students
Municipality	26	26	26	578	3,580
Sang'alo	20	20	20	372	2,360
Mwibale	16	16	16	280	1,660
Total	62	62	62	1,230	7,600

Source: Ministry of Education, Bungoma South Sub-County Education Office (2025)

The study employed a multi-stage sampling approach incorporating stratified, proportionate, simple random and purposive sampling techniques. Stratified sampling was used to account for variations in geographical and administrative contexts across the three educational zones, after which proportionate sampling allocated the selected schools across zones according to their relative size. Within selected schools, all principals and deputy principals were included because of their central role in instructional supervision, while teachers and students were selected through simple random sampling using official staff and class registers. Purposive sampling was used to select education officers as key informants with substantial experience in monitoring instructional supervision practices across the sub-county.

3.3 Instrumentation, Validity and Reliability

Instructional supervision practices were measured using structured Likert-scale questionnaire items covering classroom observation frequency, lesson plan review, quality of feedback and supervision follow-up, complemented by interview guides for principals, an observation checklist and a document analysis schedule reviewing lesson supervision reports (Table 2). Content and construct validity were established through expert review by research supervisors and educational management specialists, while face validity was confirmed through pilot testing in two schools in the neighbouring Bungoma Central Sub-County. Reliability was assessed using Cronbach's alpha during the pilot study; the instructional supervision scale returned a coefficient of 0.812, exceeding the 0.70 threshold recommended by Nunnally (1978) and confirming acceptable internal consistency.

Table 2: Operationalisation of Instructional Supervision Practices

Variable	Indicators	Scale	Instruments	Analysis
Instructional Supervision Practices	Classroom observation frequency, lesson plan review, quality of feedback, supervision follow-up	Five-point Likert scale	Questionnaires, interviews, observation checklist	Descriptive statistics, Pearson correlation, multiple regression

3.4 Data Collection, Analysis and Ethical Considerations

Data collection was conducted through scheduled visits to sampled schools. Questionnaires were administered to principals, deputy principals, teachers and students, while interviews were conducted with purposively selected principals and education officers; observation checklists were used to verify school-level supervisory practices, and document analysis schedules facilitated review of lesson observation records, supervision reports and KCSE performance records. Quantitative data were coded, cleaned and analysed in SPSS Version 28 using descriptive statistics, Pearson product-moment correlation and multiple regression analysis, with academic performance measured as the three-year average KCSE mean score. Instructional supervision was analysed both independently, through its correlation with academic performance, and jointly with the study's three other leadership variables (decision-making and governance, resource management, and teacher motivation and professional development) through multiple regression, to establish its unique contribution net of the other practices. Qualitative data from interviews were transcribed, coded and analysed thematically, and triangulated with the quantitative and documentary findings.

3.5 Ethical Considerations

Ethical clearance was obtained from the National Commission for Science, Technology and Innovation (NACOSTI) and authorisation was granted by the County Director of Education, Bungoma County, prior to data collection. Permission was subsequently sought from the principals of participating schools, after which written informed consent was obtained from all respondents; for students below 18 years, consent was additionally obtained from parents or guardians through the respective schools. Participation was entirely voluntary, and respondents retained the right to decline or withdraw at any stage without any negative consequence. The identities of respondents and schools were coded to protect confidentiality, and all data were stored securely through password-protected devices and locked physical storage, with access restricted to the researcher. Throughout the study, the researcher upheld academic integrity by avoiding plagiarism, data fabrication and misrepresentation of findings, and ensured that no participant experienced physical, psychological or social harm as a result of taking part in the research.

4. Results and Findings

4.1 Response Rate

Of the 391 targeted respondents, 352 (90%) completed and returned the research instruments – 17 principals (89%), 17 deputy principals (89%), 84 teachers (90%) and 234 students (90%) – a response rate considered statistically adequate for reliable analysis and generalisation (Table 3).

Table 3: Response Rate

Category	Targeted	Responded	%
Principals	19	17	89%
Deputy Principals	19	17	89%
Teachers	93	84	90%
Students	260	234	90%
Total	391	352	90%

4.2 Reliability of the Research Instruments

Internal consistency of the questionnaire scales was assessed using Cronbach's alpha during the pilot study, with a threshold of 0.70 or above considered acceptable (Nunnally, 1978). As shown in Table 4, the instructional supervision scale returned a coefficient of 0.812, indicating reliable measurement, while the remaining leadership and performance scales used in the wider study also exceeded the acceptable threshold, supporting the overall dependability of the data collection instruments.

Table 4: Reliability Coefficients of the Study Constructs

Variable	Cronbach's Alpha	Interpretation
Instructional Supervision Practices	0.812	Reliable
Decision-Making and Governance Practices	0.794	Reliable
Management of Teaching and Learning Resources	0.826	Highly Reliable
Teacher Motivation and Professional Development	0.801	Reliable
Academic Performance	0.785	Reliable
Overall Reliability	0.804	Highly Reliable

Source: Pilot Study Data (2025)

4.3 Relationship between Instructional Supervision and Academic Performance

Instructional supervision practices were assessed through classroom observation, monitoring of lesson delivery, review of professional records, syllabus coverage monitoring and provision of instructional feedback. Pearson correlation analysis revealed a strong, statistically significant positive relationship between instructional supervision practices and academic performance ($r = 0.693$, $p < 0.01$), the second-strongest relationship among the four leadership practices examined in the wider study, after teacher motivation and professional development ($r = 0.724$, $p < 0.01$). Multiple regression analysis, conducted jointly with the study's other three leadership variables, confirmed that instructional supervision remained a significant independent predictor of

academic performance after controlling for decision-making and governance, resource management, and teacher motivation and professional development ($\beta = 0.342$, $t = 6.17$, $p < 0.001$). The full four-variable model explained 65.8% of the variance in academic performance ($R = 0.811$, $R^2 = 0.658$, Adjusted $R^2 = 0.646$), $F(4, 347) = 166.83$, $p < 0.001$, confirming that instructional supervision makes a robust, independent contribution to this outcome (Table 5).

Table 5: Model Summary and Instructional Supervision Regression Coefficient

Statistic	Value
Correlation (r) with Academic Performance	0.693**
Model R	0.811
Model R^2	0.658
Adjusted R^2	0.646
F (4, 347)	166.830, p < .001
Instructional Supervision Unstandardised B (Std. Error)	0.321 (0.052)
Instructional Supervision Standardised Beta	0.342
t-value	6.170
Significance	p < .001

*** Correlation is significant at the 0.01 level (2-tailed). Source: Field Data (2026)*

4.4 Instructional Supervision within the Broader Leadership Model

To contextualise its relative importance, instructional supervision was compared with the study's three other leadership practices within the same regression model (Table 6). Teacher motivation and professional development emerged as the strongest predictor of academic performance ($\beta = 0.421$, $p < .001$), followed by instructional supervision ($\beta = 0.342$, $p < .001$), decision-making

and governance practices (β = 0.198, p < .001), and management of teaching and learning resources (β = 0.171, p = .002). Instructional supervision was therefore the second most influential leadership practice examined in the wider study, underscoring its substantive, though not singular, importance among the leadership functions available to school principals for improving academic performance.

Table 6: Regression Coefficients for All Leadership Practices

Variable	B	Beta	t	Sig.
Constant	0.512	—	3.580	.000
Instructional Supervision Practices	0.321	0.342	6.170	.000
Decision-Making and Governance Practices	0.184	0.198	3.910	.000
Mgt. of Teaching and Learning Resources	0.156	0.171	3.180	.002
Teacher Motivation and Prof. Development	0.402	0.421	6.930	.000

Source: Field Data (2026)

4.5 Perceptions of Instructional Supervision Practices

Among the 24 principals and deputy principals surveyed on the effectiveness of instructional supervision in their schools, 92% (n = 22) rated supervision practices as effective, while 8% (n = 2) considered them ineffective (Table 7), corroborating the strong positive statistical relationship established through the survey data.

Table 7: Principals' and Deputy Principals' Perceptions of Instructional Supervision Practices (n = 24)

Response	Frequency	Percentage

Response	Frequency	Percentage
Effective	22	92%
Ineffective	2	8%
Total	24	100%

4.6 Qualitative Findings

Thematic analysis of interview data with principals and education officers generated two dominant themes and one recurring constraint. The first theme, Enhanced Curriculum Implementation, reflected principals' reports that regular classroom supervision enabled them to monitor syllabus coverage and identify instructional gaps before these gaps affected learner performance. The second theme, Improved Teacher Professional Support, captured respondents' accounts that constructive feedback following classroom observation helped teachers refine instructional methods and classroom management practices. Document analysis of lesson observation records, supervision reports and follow-up documentation corroborated these accounts, providing independent evidence of routine supervisory activity in most sampled schools.

Despite these benefits, respondents consistently identified heavy administrative workloads as a constraint that occasionally reduced the frequency of supervision activities, thereby limiting its effectiveness. This finding qualifies the quantitative results: while instructional supervision is strongly and positively associated with academic performance, its full potential is constrained where school leaders are unable to sustain consistent supervisory contact with classrooms because of competing administrative demands.

5. Discussion of Findings

The findings provide strong empirical support for the proposition, drawn from Instructional Leadership Theory, that school leaders' direct engagement with classroom instruction is a critical determinant of learner achievement (Hallinger, 2020a). The magnitude of the correlation ($r = 0.693$) and the significant, positive regression coefficient obtained after controlling for governance, resource management and teacher motivation ($\beta = 0.342$, $p < .001$) together indicate that instructional supervision exerts a substantial and largely independent effect on academic performance in this context, consistent with findings from Barasa and Wanyonyi (2022) and Simiyu (2021) in other Kenyan settings.

The qualitative themes help explain the mechanism behind this statistical relationship: supervision appears to operate less through inspection or compliance monitoring than through

the professional support it generates – principals' engagement with syllabus coverage and constructive feedback loops that help teachers refine instructional practice. This is consistent with Zepeda's (2021) characterisation of supervision as a developmental, rather than purely evaluative, leadership function, and helps explain why the effect of supervision on performance observed in this study exceeded that reported in studies emphasising compliance-based monitoring alone.

At the same time, the finding that administrative workload constrains supervision frequency echoes the theoretical critique that Instructional Leadership Theory, applied narrowly, risks overburdening school leaders with task-oriented responsibilities (Hallinger, 2020b). This suggests that the benefits of instructional supervision documented here are likely a floor rather than a ceiling: schools able to relieve principals and deputy principals of competing administrative demands, or to distribute supervisory responsibility more broadly among departmental heads, may realise even stronger returns to instructional supervision than those captured in the present data.

For policy and practice, the finding that instructional supervision was the second-strongest predictor of academic performance, behind only teacher motivation and professional development, suggests that instructional leadership training deserves comparable policy priority to teacher welfare initiatives within Kenya's school improvement agenda. Positioning instructional supervision as a protected, resourced leadership function – rather than an activity to be undertaken only when administrative demands allow – offers a comparatively low-cost lever for improving KCSE performance in underperforming sub-counties such as Bungoma South, particularly where more resource-intensive interventions, such as infrastructure development, remain constrained by funding.

6. Conclusion

The study concludes that instructional supervision is a strategic leadership function that directly shapes the quality of teaching and learning in public secondary schools in Bungoma South Sub-County. Beyond monitoring compliance, effective supervision functions as a mechanism through which school leaders drive curriculum implementation, strengthen teacher accountability and sustain instructional consistency across classrooms. The strength and statistical significance of the relationship between instructional supervision and academic performance, corroborated by qualitative and documentary evidence, confirms that meaningful improvement in KCSE outcomes requires school leaders to treat instructional supervision as a core, protected management responsibility rather than a residual administrative task.

7. Recommendations

Based on these findings, school principals and deputy principals should institutionalise structured classroom observation schedules, timely written feedback and documented follow-up on supervision findings, prioritising these activities alongside routine administrative duties.

Boards of Management should support school leaders by strengthening departmental-level supervisory structures – for example, through heads of department – so that instructional supervision does not depend solely on the principal or deputy principal and can be sustained despite competing demands on their time.

The Teachers Service Commission should review staffing and workload allocation in public secondary schools to ensure that principals and deputy principals have adequate time for instructional supervision, and should embed structured instructional supervision practice within its Teacher Performance Appraisal and Development (TPAD) framework (Teachers Service Commission, 2023).

The Ministry of Education should strengthen pre- and in-service training for school leaders in instructional supervision techniques, and quality assurance officers should incorporate verification of supervision records into routine school inspections to reinforce accountability for this practice.

7.1 Suggestions for Further Research

Future research should examine the specific dimensions of instructional supervision (frequency, quality of feedback, and follow-up) as separate predictors of academic performance, investigate the moderating role of school leaders' administrative workload, and extend this inquiry through longitudinal designs capable of tracking how sustained instructional supervision translates into KCSE performance over multiple examination cycles.

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