Perceptions of Education Stakeholders on the Effect of Teaching Practices on Academic Achievement in Public Secondary Schools: A Case of Kakamega County, Kenya

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ABSTRACT

The purpose of this study was to determine education stakeholder's perceptions on the effect of schools' teaching practices on academic achievement in public secondary schools in Kakamega County, Kenya, The study was guided by School-Based Management Theory. A descriptive research design was used. The target population was 415 principals, 415 Deputy Principals, 415 directors of studies, and 33296 form four candidates of 2022. Stratified and purposive sampling technique was used. The sample comprised of; One hundred principals, 100 deputy principals, 100 directors of studies, and 400 students were chosen as the sample. The research instruments were; Questionnaires, an interview schedule, and document analysis schedule. Descriptive analysis was done using frequencies and percentages while inferential analysis was performed using Chi-square Analysis and Pearson product moment. Qualitative data was transcribed, analysed and reported according to emerging themes The Chi-square analysis indicated a significant difference between schools' teaching practices and academic achievement at a p value $p < 0.05$. The results indicated that there was a significant difference in their perceptions on the effect of schools' teaching practices with regard to the effect of the academic achievement with the p value $p < .001$.The null hypothesis was consequently rejected. The findings indicate a notable disparity in the perceptions of education stakeholders, particularly students and deputy principals, regarding the influence of teaching practices on academic success in public secondary schools in Kakamega County. The p-value of $p < .001$ signifies a robust level of statistical significance, suggesting that the observed difference in perceptions is improbable to arise from random chance. As a result, the null hypothesis, which posited an absence of difference in perceptions, was dismissed. The evidence indicates a divergence in perspectives between students and deputy principals regarding the influence of teaching practices on academic performance. This may suggest that each group emphasizes or appreciates distinct facets of the pedagogical approaches, or that they possess diverse experiences and insights concerning the implementation of these practices within the educational environment. This implied that that the students and deputy principals perceived differently, the effect of the teaching practices on academic achievement. The study recommends that some teaching practices that were perceived to enhance academic achievement should be used in public secondary schools of Kakamega County.

Keywords: Academic Achievement, Education Stakeholders Perceptions, Teaching Practices, Secondary Schools

I. INTRODUCTION

Teaching approaches have consistently been acknowledged as a pivotal factor influencing students' academic achievement globally. A substantial emphasis has been focused on comprehending the impact of good teaching approaches on student results worldwide. Hattie (2009) asserts that visible teaching techniques are among the foremost determinants of student achievement. This study demonstrates that instructional methods, including feedback, collaborative learning, and teacher clarity, substantially influence student learning results. The Organisation for Economic Co-operation and Development (OECD) (2018) in its report Effective Teacher Policies emphasizes that effective teaching practices correlate with enhanced student performance across diverse educational systems worldwide, including nations such as Finland, South Korea, and Singapore, noted for their superior academic achievement levels. The ongoing evolution of global education systems necessitates a comprehensive understanding of the impact of teaching approaches on academic accomplishment, which is essential for enhancing overall student success.

Numerous studies in Sub-Saharan Africa have shown the influence of teaching styles on student achievement, especially in secondary education. A report by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015) indicates that numerous African countries face challenges related to teacher quality, insufficient pedagogical skills, and restricted access to instructional materials. The analysis demonstrates that these factors substantially affect adverse academic results in the region. A study by Olatunji (2019) in Nigeria indicates that the absence of creative teaching approaches and insufficient teacher preparation significantly hinder student performance. Additionally, in East Africa, there is an increasing apprehension regarding the quality of instructional methodologies,

particularly in public secondary schools. A study conducted by Njeru and Wambugu (2021) in Kenya, entitled The Role of Teachers' Instructional Practices on Student Academic Performance, revealed that the lack of implementation of student-centered teaching methodologies resulted in diminished academic success at numerous schools in the area.

In Kenya, teaching practices have been identified as a crucial factor impacting student academic attainment. In Kakamega County, local studies reveal a direct association between teaching approaches and student achievement in secondary schools. Nandwa's (2020) study, titled Teaching Practices and their Impact on Academic Achievement in Public Secondary Schools in Kakamega County, revealed that conventional teacher-centered approaches, including rote learning, remain prevalent in the area, resulting in subpar academic performance. The research emphasizes the necessity for contemporary, student-focused teaching methodologies to enhance success in national assessments. A study by Wekesa and Shikuku (2019) noted that insufficient teacher readiness and the absence of professional development programs for educators were obstructing effective teaching in the county. The findings underscore the necessity to investigate education stakeholders' perspectives regarding the impact of teaching practices on academic performance, as this understanding could guide policy modifications and measures to improve student achievement in Kakamega County.

1.1 Statement of the Problem

Although teaching approaches are crucial in influencing student academic success, there exists a notable deficiency in comprehending how various educational stakeholders view their effects, especially in the context of public secondary schools in Kakamega County. Current literature mostly emphasizes the direct correlation between pedagogical approaches and student performance, frequently overlooking the perspectives and experiences of essential stakeholders, including educators, learners, and administrators. Studies such as those conducted by Mupa and Chinooneka (2015) underscore the significance of successful teaching approaches, although they have not comprehensively examined the perceptions of participants in the educational process. Wanjohi and Yara (2017) emphasize that regional and contextual factors, including school environments, resources, and local educational legislation, might influence the efficacy of teaching approaches, indicating the need for localized studies to bridge this gap.

Kakamega County faces educational challenges, including teacher shortages, overcrowded classrooms, and inadequate learning resources; however, there is a paucity of empirical research examining stakeholder perceptions of these issues and their impact on academic achievement (Orodho, 2018). Furthermore, whereas research in other areas has examined the significance of stakeholder engagement in education (Nzoka & Orodho, 2014), Kakamega County is devoid of extensive studies on this subject. This gap deprives educators, politicians, and school administrators of essential insights regarding the perception of instructional approaches and their perceived influence on student performance.

This study seeks to address this gap by investigating the perceptions of educational stakeholders regarding the impact of teaching practices on academic achievement in public secondary schools in Kakamega County, thereby enhancing the understanding of how these perspectives may facilitate or impede student success.

1.2 Research Objectives

The study sought to determine the Perceptions of Education Stakeholders on the Effect of Teaching Practices on Academic Achievement in Public Secondary Schools: A Case of Kakamega County, Kenya

1.3 Research Hypothesis

Ho_1: Education stakeholders perceive that teaching practices have no significant effect on the academic achievement of students in public secondary schools in Kakamega County, Kenya

II. LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. School-based management (SBM) theory

This theory pertains to the methodical distribution of authority and responsibility concerning decisions and critical issues associated with school operations, all within a centrally established framework of objectives, policies, curriculum, standards, and accountability. The inception of the theory can be traced back to the late 1980s, attributed to the work of Babara (2015), determined that school-based management can be understood conceptually as a manifestation of decentralization or a formal modification of governance structure. This theory posits that the individual school serves as the fundamental unit of enhancement, with the restructuring of decision-making authority being the principal mechanism by which such improvement can be both stimulated and sustained.

This study aims to explore the perceptions of educational stakeholders regarding the impact of internal quality and standards assessment on the academic performance of public secondary schools in Kakamega County. The assessments of internal quality and standards conducted within the school encompass the participation of parents, students, teachers, and principals, who collaboratively make decisions and execute them in accordance with the policies established by the board of management. This study employed the SBM due to the significance of individual schools' independence, responsibility, and accountability in relation to the academic success of their students. Regrettably, Kenyan secondary schools lack designated personnel responsible for overseeing quality and ensuring adherence to required standards.

2.2 Empirical Review.

A study by Soodmand et al. (2018) in Iran examined the impact of teachers' experience and educational level on their understanding of reflective teaching among Iranian English educators. The results showed that while teachers reported a moderate level of reflective teaching, barriers like knowledge deficits, situational inhibitors, and affective-emotional factors hindered their practice. Emotional and cognitive factors also impeded students' capacity for reflective thinking. The study's focus on Iran and quality assessment did not include internal quality and standards assessment.

McCabe and O'Connor (2014) study at a Trinidad university found that a student-centered approach encourages students to take greater responsibility for their education and aligns with professional confidence in moving away from conventional teaching practices. The study also found a mutual comprehension within the student-centered approach, with implications for continuing practice in public secondary schools in Kenya.

Tsang (2011) study at the University of Queensland found that third-year undergraduate students appreciate the integration of reflective group discussions into their curriculum. They see them as a parallel approach to reflective writing, fostering collaboration and diverse perspectives. The study also examined educational stakeholders' perceptions of internal quality and standards assessment on academic achievement.

Momanyi (2019) examined the impact of teaching management practices on student performance in secondary schools in Manga Sub County, Nyamira County. The research found a positive correlation between academic performance and teacher-centered and student-centered management, as well as assessment methodologies. The study also found a significant correlation between management approaches prioritizing students, teachers, and assessment. The study suggests the integration of these methodologies in educational institutions to improve performance outcomes.

Imbega (2017) examined the impact of quality assurance practices on students' academic performance in public secondary schools in Trans Nzoia West. The research assessed the influence of external and internal quality assurance practices on student achievement, and investigated the correlation between established standards and quality assurance practices and high grades in the KCSE examination. The study used the capital theory of school effectiveness and human capital theory. The analysis involved 58 public secondary institutions. Imbega found that while some quality assurance techniques were lacking externally, they were sufficient internally. Most people agreed that external quality assurance techniques affected student achievement. However, if internal quality and standards assessments were done as externally, learners' academic achievement would significantly improve. The study highlights the importance of addressing internal quality and standards assessments to improve students' academic performance.

Mutia (2018) highlights the importance of team teaching in academics, where educators collaborate to assist students in various subjects. This involves formulating course objectives, designing syllabi, creating lesson plans, disseminating knowledge, and evaluating learning outcomes. The increasing prominence of science courses in secondary education has made collaborative teaching by specialized educators indispensable. Many high schools offer geosystems courses, combining experienced and less experienced educators. The results show improvements in teaching methods, with adjustments to class size, location, and timing considered acceptable.

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III. METHODOLOGY

3.1 Research Design

The study employed a descriptive research design. The design provided a detailed and accurate perceptions of the characteristics and behaviors of the education stakeholders. The descriptive research design was relevant because it made it possible for the researcher to collect data about the stakeholders' perceptions on the effect of internal quality and standards assessments on the learners' achievement in public secondary schools in Kakamega County.

3.2 Location of the Study

The research was carried out in Kakamega County, in the Republic of Kenya in 2010. According to the 2019 Kenya population and housing census, the population was 1,867,579. The County has 415 public secondary schools which comprised of; 2 National schools, 26 Extra County schools, 20 County schools and 367 Sub county schools. The southern part of the County is hilly and made of granite. According to Uwezo-Kenya (2013), students in the public

secondary schools had low levels of reading, writing, and mathematics proficiency, giving an impression that the quality of education in the county was rather low. Consequently, there was need to conduct a study of this kind in the County with a view to assess the stakeholders' perceptions on the role of internal quality and standards assessment on academic achievement.

3.3 Target Population

The target population comprised of 415 Principals, 415 Deputy Principals, 415 directors of studies, and 33,296 students, from four hundred and fifteen (415) public secondary schools in Kakamega County, Kenya. The public secondary schools that were selected included the national schools, extra county schools, county schools and sub county secondary schools as shown in table 1.

Table 1

Categories of secondary Schools in Kakamega County

Category	No. of Public Secondary Schools	Percentage (%)
National	2	0.5
Extra-County	26	6.5
County Schools	20	5
Sub-County Schools	367	88
Total	**415**	**100**

3.4 Sample Techniques and Sample Size

3.4.1 Sampling Techniques

The study employed stratified random sampling techniques to select its sample. The classifications comprised various categories of public secondary schools located in Kakamega County: Sub County schools, County schools, Extra County schools, and National schools. The stratified random sampling method proved beneficial as it guaranteed that each stratum of the target population had an equal chance of inclusion in the study, while maintaining the sample size (Kothari, 2004). The sampling frames consisted of two components: a comprehensive list of all public secondary schools and a detailed enumeration of all form four students from the 2022 cohort within each selected public secondary school in Kakamega County.

3.4.2 Sample Size Determination

The sample sizes for the various categories of the population are as shown in Table 1. The sample sizes of the principals, deputy principals and the director of studies were determined on the basis of Nassiuma (2009) formula as presented below:

$$n = \frac{Nc^2}{c^2+(N-1)e^2}$$

Where: n = sample size, N = population size, c = coefficient of variation (≤ 50%), and e = error margin (≤ 5%). Substituting into the formula:

$$n = \frac{34541 * 0.5^2}{0.5^2 + (34541 - 1) * 0.05^2} \cong 100$$

A sample size of 100 schools was obtained using the above formula Nassiuma as cited by (Hungi and Thuku, 2010).The sample size of the form four students of the 2022 cohort was determined by the Cochran formula (1977).The formula is as shown:

$$n_0 = \frac{z^2pq}{e^2}$$

Where; e was the margin of error (≤5%), p was the estimated proportion in the estimated population (67%), q is (1-p), and z was the value found in the z Table (1.96) (Israel, 2013).

Substituting to the above equation:

$$n_0 = \frac{1.96^2 * 0.67 * (1 - 0.67)}{0.05^2} \cong 340$$

Table 2
Population and Sample

Category	Population(N)	Sample size(n)	% of Sample
Principals	415	100	24
Deputy principal	415	100	24
DOS	415	100	24
Students	33296	400	
Total	**34541**	**700**	

3.5 Data Collection Instruments

The study relied on primary and secondary data, which was collected using three sets of questionnaires and an interview schedule. These tools were; the Principal's interview schedule (PIS), the deputy principal's questionnaires (DPQ), the Director of studies questionnaire (DOSQ), and the Students' questionnaire (SQ).

3.5.1 Principals Interview Schedule

This instrument had 13 open-ended items that collected different types of data from principals of public secondary schools in the County. The data that was obtained comprised of the following: perceptions of the principals with regard to the effect of teaching practices on academic achievement in public secondary schools in Kakamega County.

3.5.2 Deputy Principal's Questionnaires

The Deputy Principal's Questionnaires had open ended and close ended items. The instrument has 3 sections with twenty four items which collected quantitative data. The instrument collected information on the perceptions of the deputy principals on the effect of; teaching practices, examination practices and the quality control practices on academic achievement.

3.5.3 Director of Studies Questionnaire

The director of studies questionnaire had three sections; section A had questions that sought for data on objective two. This data was about the perceptions of the DOSs on the effect of examination practices on academic achievement. Section B of the questionnaire collected data on the KCPE marks for students in the years 2019, 2018, 2017, 2016, and 2015. The directors of studies were also requested to fill in students' corresponding KCSE exit results for the period 2022, 2021, 2020, and 2019.The internal examination scores at the end of each class were collected. This data was gathered by carrying out document analysis, whose main purpose was to provide the background information and cover comprehensive data (Bowen, 2009).

3.5.4 Students Questionnaire

The student's questionnaire had 3 sections. Quantitative data was collected using this instrument. The data comprised of open ended questions from objective one and two. It was used to collect data on the student's perceptions on the effect of teaching practices and examination practices academic achievement.

3.6 Validity Test

This investigation was grounded in the principles of both content and face validity. The concept of content validity refers to the extent to which the components of a test accurately reflect the construct that is being evaluated. The questionnaires were administered to my supervisors at Masinde Muliro University of Science and Technology for the purpose of assessing the content and face validity of the instruments. The contents of the instruments were refined in accordance with the insights and feedback provided by the supervisors. The questionnaires were subsequently restructured to align with each research inquiry. The integrity of the interview process was maintained by establishing a direct alignment between the questions posed and the competencies being assessed. The aim of validity was to evaluate the degree to which the instruments would accurately gauge what they were intended to measure. Robson, 2011).

3.7 Reliability Test

Reliability refers to how consistently a research instruments measured the same aspect although administered at different times. According to Amisi (2016), similarly, reliability relates to the stability of test results across administrations, item pools, and other contextual factors. In order to determine whether or not the responses were consistent amongst themselves, the Cronbach reliability coefficient was used to test the reliability of instruments. The reliability estimate known as Cronbach's alpha takes on values between 0 and 1, because it covered the range of internal consistency. If the values were more than the threshold of 0.7, established by Nunnaly (1978), and cited by Aroni (2013),

then the reliability of the instrument is high. In this study, the interview schedules were reviewed to increase dependability. The result values ranged from 0.786 to 0.836, 0.713 to 0.743. George and Mallery (2008), stated that a Cronbach alpha coefficient greater than or equal to 0.7 was acceptable. All the instruments were therefore retained for the study.

Table 3
Reliability Test

Study Variable	No of Test Items	Cronbach's Alpha
Schools' teaching practices	7	0.786
KCSE Performance	5	0.743

IV. FINDINGS & DISCUSSION

This section presents the findings on the perceptions of the education stakeholders concerning the effect of the teaching practices on academic achievement of their schools.

4.1. Response Rate

The number of public secondary schools that were visited were 100 out of the 415 secondary schools in the County. The education stakeholders comprised of the principals, the deputy principals, the director of studies and the form four students in the 2022 cohort. The response rate were as follows: 67% for the principals, 77% for the deputy principals, 72% for the DOSs and, 67% for the students.

4.2 General Demographic Information

Concerning gender, 67 of the interviewed principals comprised 70% male and 30% female participants. Of the 77 deputy principals, 33% were male and 67% were female. Finally, among the 72 directors of studies interviewed, 70% were male and 30% were female. Regarding the greatest educational qualifications of the principals, it was determined that 65% possessed a university degree, 22% held a master's degree, and 13% had a diploma in education. Among the interviewed deputy principals, 81% possessed a university degree, 10% held a master's degree, and 6% had a diploma in education. Among the interviewed directors of studies, 80% possessed a bachelor's degree, while 20% held a master's degree.

4.3 Type of Secondary School

This section shows the distribution of public secondary schools in Kakamega County by the different types of schools categorization. The details are tabulated in Table 4.

Table 4
Categorization of Public Secondary Schools in the County

Type of school	Number	Percent
National	1	2.0
Extra-County	17	27.0
County	16	24.0
Sub-county	32	47.0
Total	**66**	**100.0**

According to Table 4, forty seven percent (47%) of the public secondary schools are sub county schools, twenty seven percent (27%) are Extra County schools, twenty four percent (24%) were County schools, while two percent (2%) are National schools.

4.3.1 Students' Perceptions on the Effect of Teaching Practices on Academic Achievement in Public Secondary Schools.

This section presents the findings on the students 'perceptions on the effect of the various teaching practices on academic achievement in their schools. This is as detailed in Table 5. The rating was categorized as follows; 1: No effect (N) 2: A negative effect NE) 3: A low positive effect (L) 4: A moderate positive effect (M) 5: A high positive effect (H)

Table 5

A Summary of the Students' Perceptions on the Effect of Teaching Practices

Teaching practices			Perceptions			
SN	H	M	L	NE	N	TOTAL
1. DI	92(34%)	140(52%)	14(5%)	21(8%)	1(1%)	268(100%)
2. TT	96(36%)	68(25%)	102(38%)	2(1%)	0(0%)	268(100%)
3. ME	91(34%)	147(55%)	28(10%)	0(0%)	0	268(100%)
4. GP	101(38%)	65(24%)	101(37%)	1(1%)	0(0%)	268(100%)
5. VTM	74(28%)	55(21%)	120 (44.7%)	8(4%)	7(3%)	268(100%)
6. PL	100(37%)	100(37%)	23(9%)	25(10%)	20(7%)	268(100%)
7. Q .A	84(31%)	100(37%)	50(19%)	34(11%)	0	268(100%)
Total	**638(34%)**	**675(36%)**	**413(22%)**	**94(5%)**	**56(3%)**	**1876(100%)**

Key

DI: Digital Instruction GD : Group discussion RT: Reflective teaching QA : Question and answer
TT: Team Teaching PL : Practical Lesson ME: Marking of exams VTM: Varied teaching methods

Table 5, shows the perceptions of the form four students with regard to the effect of the different teaching practices on academic achievement. From the findings, it emerged that 34% of the students were of the view that the teaching practices engaged by the teachers had a very high positive effect on the academic achievement of the learners. While 36% and 22% of the students felt that the teaching practices had a moderate positive effect and low positive effect respectively. Lastly, 3% of the students opined that teaching practices did not in any way affect the learners' academic achievement. As far as the individual teaching practices were concerned; 38% of the students felt that group discussions had the highest positive effect on their academic achievement. While 37% of the students felt that the practical lessons had the highest positive effect.

4.3.2 Deputy Principal's Perceptions on the Effect of Teaching Practices on Academic Achievement.

This section presents the findings on the perceptions of the deputy principals on the effect of the various teaching practices on academic achievement of public secondary schools. The descriptive data from the deputy principals with regard to their level of agreement with the statements on the schools' teaching practices, was rated on a 5 point Likert scale. The details of their responses are shown in Table 6. The rating was categorized as follows;

1: No effect (N) 2: A negative effect NE) 3: A low positive effect (L) 4: A moderate positive effect (M) 5: A high positive effect (H)

The perceptions of the deputy principals with regard to the effect of the different teaching practices on academic achievement was summarized in Table 6.

Table 6

A Summary of the Deputy Principal's Perceptions

Teaching practices			Perceptions			
	H	M	L	NE	N	TOTAL
1.DI	28(37%)	23(30%)	25(33%)	1(1%)	0(0%)	77(100%)
2.TT	20(26%)	28(37%)	13(2%)	6(8%)	9(12%)	77(100%)
3. RT	27(39%)	23(31%)	25(33%)	2(5%)	0(0%)	77(100%)
4.GD	36(46%)	22(29%)	19(1%)	0(0%)	0(0%)	77(100%)
5 VTM	20(26%)	25(26%)	29(12%)	2(2%)	1(1%)	77(100%)
6. PL	20(26%)	22(29%)	31(40%)	2(5%)	2(5%)	77(100%)
7 QA	22(29%)	20(26%)	20(26%)	9(12%)	6(8%)	77(100%)
Total	**173(32%)**	**163(31%)**	**162(30%)**	**23(5%)**	**18(2%)**	**539(100%)**

Key

DI: Digital Instruction GD : Group discussion QA : Question and answer
TT: Team Teaching PL : Practical Lesson RT: Reflective teaching
MT: Marking of exams VTM: Varied teaching methods

Table 7 shows that 32% of the deputy principals were of the view that teaching practices engaged by teachers had a very high positive effect on the academic achievement of the learner while 31% and 30% of the deputy principals felt that the teaching practices had a moderate positive effect and low positive effect respectively on the academic achievement. Lastly, 5% of the deputy principals opined that teaching practices did not in any way affect the learners'

academic achievement. As far as the individual teaching practices were concerned; 46% of the deputy principals felt that students discussing in groups had the highest positive effect on their academic achievement. The perceptions of the deputy principals and the students with regard to the effect of the different teaching practices on academic achievement are shown in detail in Table 7.

Table 7
Weighted Average of the Deputy Principals' and Students' Perception

Stakeholders			**Perceptions**			
	H	**M**	**L**	**NE**	**N**	**Total**
Students	34%	33%	29%	2%	1%	100%
Deputy principals	32%	31%	30%	5%	2%	100%
Weighted average	32.931%	31.931%	29.535%	3.604%	1.535%	100.000%

Table 7 shows that on average, 32.931% of both the deputy principals and students who were of the view that teaching practices engaged by teachers had a very high positive effect on the academic achievement of the learner while 31.931% and 29.535% of them felt that the teaching practices had a moderate positive effect and low positive effect respectively on the academic achievement. Lastly, 3.604% of the respondents opined that teaching practices did not in any way affect the learners' academic achievement and lastly 1.535 perceived that the teaching practices had a negative effect on academic achievement.

4.3.3 Principals' Perceptions on the Effect of Teaching Practices on Academic Achievement

This section presents the findings on the perceptions of the principals concerning the effect of the teaching practices on academic achievement of their schools. The principals were interviewed and their responses grouped in themes then analyzed thematically. While the students' and the deputy principals' rated their responses on a 5 point Likert scale. These responses were in form of perceptions as elaborated as 1: No effect (N) 2: A negative effect (NE) 3: A low positive effect (L) 4: A moderate positive effect (M) 5: A high positive effect (H).

The teaching practices that are implemented in their schools were grouped into themes as displayed in Table 8

Table 8
Principals' Perceptions

Theme	**Percentage (%)**
Motivational Speakers and Creaming	14
Remedial Programs	38
Internal Symposium	16
KNEC Facilitators	3
Inter-School Competition	8
Academic Counselling	5
Academic Families	16
Total	**100%**

According to Table 8, thirty eight percent (38%) of the principals were of the opinion that remedial programs do improve academic performance. While three percent (3%) of them felt that engaging KNEC facilitators had the least effect on performance. In addition, 16% of the principals felt that internal symposiums and academic families had an effect on academic achievement. This findings concurred with those of Schwartz (2012), who opined that for students to succeed in formal courses, the learners required short-term help in acquiring content or skills. These educational interventions addressed the learning needs of a specific group of children who lagged academically in incorporating knowledge or mastering specific skills. The findings also were in tandem with those of Bohn (2011), done in Brazil that found out that, remediation of students was important and as part of their employment agreements, teachers in Brazil's public schools are required to offer either acceleration or remediation to students who need it. The use of symposia and academic families was said to be a teaching practice used by 16%each of the principals. These findings corroborated with the findings of a study done by Usha et al (2022), on the effect of symposia on learning compared to traditional lecture method on medical graduate students in India. According to them, symposia were a type of program that was competency based. The competency-based curriculum puts emphasize student-centered learning methods. Usha et al insisted that symposia was a learner-centered method emphasizing the acquisition of competencies and skills. The medical

students felt that symposia increased their opportunities for active learning by 83.5%. Additionally 86.9% of the medical students were of the opinion that symposia boosted their public speaking abilities. Although symposia improves academic achievement, Usha et al (2022) observe that it generally benefits the students who actively participate. All students could not present topics due to limited time. The students presenting symposium topics benefited more from that content than those who listened passively. This finding corroborated the findings by Honjen et al (2016) in their study to examine the effects of the principals' invitation of mathematics specialists on Students' performance in mathematics in KCSE examination in Meru County, Kenya; that, 32 (34.8%) schools utilized group discussions. Regarding CATs, 13 minority (14.1%) principals asserted that they used it to improve performance. Mathematics contests were also cited by only nine (9.8%) of the principals and eight (8.7%) also claimed that they organized symposiums for their students. Symposia were found to be rarely adopted strategies by the schools. According to this study, 70.65% of the schools performed poorly in mathematics, did not use symposia in teaching mathematics, while 3.3% of the schools that excelled in mathematics organized symposia for their students. It was consequently concluded that symposia were an excellent strategy for improving students' performance in mathematics. In the current study 14 % of the principals were of the opinion that engaging motivational speakers would help to improve KCSE scores. A study by Achieng (2018), on organizing joint activities was the most common strategy (74.1%), followed by awarding (66.7%), providing resource materials (63.0%), inviting motivational speakers (63.0%), and inviting role models (51.9%), with organizing trips being the least common strategy (0%). This research also focused on the perceptions of teachers regarding the influence of motivational strategies used by career teachers on students' choice of computer studies in secondary schools in Kisumu County, Kenya. Only 3%of the sampled principals engaged these examiners. These sentiments were expressed by Campbell and Malkus (2010), who reported that when external subject specialists were invited to schools, they gave students a new positive change on how they perform with time. However, most of the principals in these schools relied on their subject teachers as the subject specialists. The reason may be that the external examiners were expensive. If a school decided to get them, a minimum of fifteen examiners would be required out of the possible thirty; which is very expensive to some schools.

4.4 Academic Achievement of Public Secondary Schools in Kakamega County, Kenya

The study sought to establish the status of student achievement in relation to teaching practice. From Table 9, a significant 55% of participants perceive a detrimental impact, whereas 28% indicate no observable effect. This indicates that digital instruction is not broadly regarded as advantageous, potentially owing to obstacles such as resource availability or training deficiencies. Research conducted by Tsang (2011) and Soodmand et al. (2018) indicates that the effective integration of digital instruction has a beneficial impact on academic performance. Nonetheless, obstacles in accessibility or execution may undermine these advantages.

Thirty percent perceive it as detrimental, while twenty-nine percent indicate no effect, suggesting a restricted perceived influence on academic performance. Research conducted by Mutia (2018) and Mercy and Ujiro (2012) substantiates the assertion that digital resources contribute positively to the learning process, while also highlighting that favorable results are contingent upon adequate training and infrastructure. A significant portion, specifically 46%, perceives a detrimental impact, whereas 30% indicate no discernible effect, implying that stakeholders may believe team teaching suffers from a lack of coordination or coherence. Imbega (2017) discovered that team teaching has the potential to enhance topic coverage and yield improved outcomes, contingent upon sufficient planning and collaboration among educators.

A significant 46% perceive it unfavorably, while 22% observe no discernible effect, indicating a perceived deficiency in impact or perhaps a lack of introspective practices among educators. Momanyi (2019) highlights that engaging in reflective practices enhances teaching effectiveness, subsequently leading to improved academic performance, as educators can refine their methodologies informed by previous experiences. Opinions vary, with 31% indicating a detrimental impact and 16% noting a minimal positive effect. A mere 3% perceive it as having a significantly positive impact. Soodmand et al. (2018) discovered that well-structured group discussions foster collaborative learning and enhance critical thinking, thereby positively influencing academic achievement.

A notable 44% report experiencing a negative impact, while a significant 42% observe no effect at all. This suggests that practical lessons may be either underutilized or not effectively aligned with academic objectives. Research conducted by Mercy and Ujiro (2012) underscores the notion that experiential learning markedly improves understanding and memory retention, thereby favorably influencing academic performance, particularly in STEM disciplines. With 40% recognizing a detrimental impact and 28% observing no effect, this approach is not universally regarded as advantageous. Tsang (2011) observed that Q&A sessions enhance understanding by addressing uncertainties, indicating that the degree of student engagement and participation may influence their efficacy. The prevalence of negative perception stands at 38%, whereas 33% report no discernible effect, suggesting a potential resistance to diverse methodologies or difficulties in their adaptation. Mutia (2018) posits that a variety of teaching

methodologies cater to different learning styles and typically improve academic performance, thereby underscoring the necessity for flexibility in pedagogical strategies.

The overarching pattern in this data indicates a constrained favorable perception of these pedagogical methods, with negative or neutral outcomes prevailing in the responses. This stands in stark contrast to a significant body of literature that advocates for diverse and active learning strategies as beneficial determinants of academic achievement. Possible reasons for this discrepancy may include obstacles such as insufficient resources, absence of training, and systemic challenges that influence the understanding and execution of these practices.

Table 9

Status of Student Achievement

Statement	No Effect	Negative Effect	Low Positive effect	Moderate positive effect	High positive effect	Total
Digital instruction enhances students' understanding of complex topics.	20(28%)	40(55%)	5(13%)	2(3%)	3(4%)	72(100%)
The use of digital resources in teaching has improved students' academic performance.	21(29%)	25(30%)	11(10%)	2(3%)	0(9%)	72(100%)
Team teaching helps to cover topics in more depth, improving student outcomes.	23(30%)	33(46%)	12(7%)	4(6%)	0(6%)	72(100%)
Team teaching helps to cover topics in more depth, improving student outcomes.	30(42%)	28(39%)	14(7%)	0(13%)	0	72(100%)
Reflective teaching practices help teachers identify effective strategies that enhance student achievement.	16(22%)	39(46%)	10(13%)	4(6%)	3(4%)	72(100%)
Group discussions enable students to grasp concepts more effectively, positively affecting academic results.	24(31%)	27(29%)	27(16%)	1(13%)	1(3%)	72(100%)
Practical lessons enhance students' understanding and retention of subject matter, which is reflected in their performance.	30(42%)	32(44%)	12(16%)	3(4%)	2(3%)	72(100%)
Regular practical lessons contribute significantly to students' academic achievements.	20(28%)	27(38%)	15(21%)	5(7%)	2(3%)	72(100%)
The question-and-answer method helps students clarify doubts, which positively impacts their performance.	20(28%)	29(40%)	18(25%)	4(6%)	3(4%)	72(100%)
Using varied teaching methods addresses different learning styles, which boosts academic achievement.	24(33%)	27(38%)	12(17%)	3(4%)	2(3%)	72(100%)

4.5 Testing the Null Hypothesis

HO_1: Education stakeholders perceive that teaching practices have no significant effect on the academic achievement of students in public secondary schools in Kakamega County, Kenya.

The hypothesis was tested by using a chi-square analysis using the statistical package for social sciences (SPSS).The results are as detailed in Table 10.

4.5.1 Students' Perceptions on Teaching Practices

Table 10

A Chi-Square Analysis of the Students' Perceptions

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	444.286[a]	24	.001
Likelihood Ratio	452.996	24	.000
N of Valid Cases	1870		

Table 10 shows the results of the chi-square test for students' perceptions. The results reveal that there is a significant difference in the students' perceptions on the effect of the teaching practices on academic achievement with the p value of, $p < 0.001$. This result implies that the students were of the opinion that certain teaching practices were more effective than others with regard to achieving academic scores. These findings were in tandem with Mutia (2018), who opined that varied teaching methods meted out to students by teachers such as team teaching, reflective group discussion, multi perspective critical thinking, and peer learning purposefully, benefitted students. The key benefits perceived by students included content mastery, content retention and content delivery.

4.5.2 Deputy Principals' Perceptions on Teaching Practices

This section dealt with the chi-square analysis results with regard to deputy principals' perceptions on the effect of teaching practices on the academic achievement of students in public secondary schools. The details are as shown in Table 11.

Table 11

A Chi-Square Analysis on the Deputy Principals' Perceptions

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	59.720[a]	24	.004
Likelihood Ratio	59.209	24	.005
N of Valid Cases	536		

Table 11 shows the chi-square test for the deputy principals' perceptions. The results showed that there was a significant difference in their perceptions on the effect of schools' teaching practices and academic achievement with a p value of $p < 0.004$. This implied that there was a difference in what the deputy principals perceived as affecting the academic achievement on matters to do with teaching practices. These results meant that the deputy principals' perceived that the teaching practices aforementioned had an effect on the academic achievement of the students. However, the deputy principals' perception on the effect of the teaching practices on academic achievement was lower compared to that of the students. This findings corroborate the findings in a study done at Manga Sub County by Momanyi (2019), which analyzed how different classroom management techniques influenced student achievement in secondary schools Academic performance was found to be favorably and significantly related to student-centered management, teacher-centered management, and assessment strategies. Assessment management technique, teacher-centered management, and student-centered management all worked together to make a big difference in students' grades. The instructional management procedures anticipated a 53.5 percent improvement in student performance. In contrast, this research found that a 1% improvement in classroom instruction led to a 44% improvement in student achievement. The study concluded that Student-centered management, teacher-centered, and assessment strategies were positively and significantly related to academic performance. The Student-centered methods were discussed.

4.5.3 Comparison of Deputies Perceptions and Students Perceptions

This section shows the chi-square analysis results with regard to the perceptions of the education stakeholders on the effect of teaching practices. The details are shown in Table 12.

Table 12

A Chi-Square Analysis on Students and Deputy Principals' Perceptions.

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	75.067[a]	24	.001
Likelihood Ratio	74.594	24	.000
N of Valid Cases	345		

Table 12 shows the results of the chi-square test for deputy principals' and students' perceptions. The results indicated that there was a significant difference in their perceptions on the effect of schools' teaching practices with regard to the effect of the academic achievement with the p value $p < .001$.The null hypothesis was consequently rejected. This implied that that the students and teachers perceived differently, the effect of the teaching practices on academic achievement. Their differences indicated by the chi-square values, with students showing a stronger difference (χ^2 =444.286) compared to deputy principals (χ^2 =59.720). This suggested that students' perceived that the teaching practices their teachers used to instruct them had a stronger effect to their academic performance than the perceptions of deputy principals' perceptions.

These findings concurred with McCabe and O'Connor (2014), who reported that a student-centered approach to learning encouraged students to have more responsibility for their learning and was a process that relied heavily on professional confidence to let-go of traditional teaching methods. The methods included question-and-answer techniques, group discussions practical lessons. These methods engaged the learner more, so the learner could learn specific competencies and retain content. This meant that the student should be active, attentive, curious, optimistic interested in learning. This, in turn, increased the student's performance in examinations. Nganga (2011), studied factors contributing to low grades in mathematics in the KCSE examination in the Kiambu district and found that the methodology used in schools needed to be more problem-centered and Student-centered. The student should solve the problems and do what was learned. This required time since

learners had different cognitive abilities, yet teachers had been given an ultimatum about syllabus coverage to get the desired appraisal targets. That may be why there was a new shift to competence-based learning where the curriculum insisted on the learner gaining competencies instead of rote learning that tested memory. Wachanga and Mwangi (2004) reiterated that teaching methodology was a crucial factor in determining the academic performance of learners in whichever system of education. A methodology that enabled the leading players in the learners to do what was learned was the best, i.e. learner-centered teaching methods. Learner-centered teaching methods involve learners' senses and aid the learners in content retention. Learner-centered teaching methods included discussion and presentation by learners, Team teaching, and teachers' reflective teaching. Most examinations tested how much content the learner retained, which plainly explains the positive relationship. Momanyi (2019), looked at how different teaching management practices impacted the academic performance of secondary schools in Manga Sub County and found results consistent with those found above. Academic performance was found to be favorably and significantly related to both student-centered and teacher-centered management approaches, as well as assessment strategies. Assessment management technique, teacher-centered management, and student-centered management all worked together to make a big difference in students' grades. The instructional management procedures anticipated a 53.5 percent improvement in student performance.

V. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The findings indicate a notable disparity in the perceptions of education stakeholders, particularly students and deputy principals, regarding the influence of teaching practices on academic success in public secondary schools in Kakamega County. The p-value of $p < .001$ signifies a robust level of statistical significance, suggesting that the observed difference in perceptions is improbable to arise from random chance. As a result, the null hypothesis, which posited an absence of difference in perceptions, was rejected. The evidence indicates a divergence in perspectives between students and deputy principals regarding the influence of teaching practices on academic performance. This may suggest that each group emphasizes or appreciates distinct facets of the pedagogical approaches, or that they possess diverse experiences and insights concerning the implementation of these practices within the educational environment. For example, students may prioritize practices that actively involve or assist them, whereas deputy principals might concentrate on the broader aspects of teaching quality and adherence to policy. The perceptual differences highlight a possible disconnect in comprehension or dialogue between students and school administrators. Identifying this disparity can assist educational leaders in adopting instructional methodologies that cater to the learning requirements of students while simultaneously aligning with administrative objectives. It may also necessitate initiatives aimed at fostering mutual comprehension, such as feedback sessions wherein students and administrators can engage in discourse regarding effective pedagogical practices. Considering the divergent perspectives of deputy principals and students, this observation may indicate a necessity for professional development or training for educators to reconcile the discrepancies between administrative perceptions of effective teaching and the insights of students regarding what truly enriches their learning experience. Engaging in workshops, targeted training on student-centered methodologies, or fostering collaborative discussions may enhance the alignment of pedagogical practices with the anticipations of students.

5.2. Recommendations

Some teaching practices that were perceived to enhance academic achievement should be used in public secondary schools of Kakamega County. This study paves the way for additional inquiry into the particular pedagogical methods that shape varying perceptions. Qualitative methods such as focus groups or interviews may elucidate the underlying reasons for these disparities and identify the factors that most significantly influence student academic performance from both student and administrative viewpoints.

REFERENCES

Amisi, E. (2016). *Influence of Socio-Economic Factors on Pupils' Transition Rates from Primary to Secondary Schools in Kisumu East Sub County, Kenya*. Master of Education Thesis, University of Nairobi.

Aroni, M. K. (2013). *Effects of Subsidized Secondary Education on Access to Public Secondary Schools in Nyamache Division, Kisii County, Kenya*. Master of Education Thesis, Kenyatta University.

Babara, M. M. (2015). *Involvement of Teachers in Decision-Making: The Case of Selected Public Primary Schools in Missenyi District, Kagera Region, Tanzania* (Doctoral dissertation, University of Dodoma).

Bohn, D. (2011). School principal from Escola Estadual Professora Rosentina Faria Syllos, Campinas, São Paulo, Brazil. Campinas, SP, Brazil: Correspondence and expert advice.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*.

Campbell, A. (2018). Evolution education in New Zealand. In *Evolution Education Around the Globe* (pp. 431-446). Springer, Cham.

Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.). John Wiley & Sons.

England, P. (2005). Gender inequality in labor markets: The role of motherhood and segregation. *Social Politics: International Studies in Gender, State & Society, 12*(2), 264-288.

Hattie, J. (2009). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. Routledge.

Hungi, N., & Thuku, F. W. (2010). Differences in pupil achievement in Kenya. *International Journal of Educational Development, 30*(1), 33-43.

Imbega, L. J. (2017). *Influence of Quality Assurance Practices on Students' Academic Performance in Public Secondary Schools in Trans Nzoia West Sub-County* (Doctoral dissertation, Moi University).

Israel, G.D. (2013). *Determining Sample Size*. Institute of Food and Agricultural Sciences (IFAS), University of Florida, PEOD-6, 1-5.

Kamla, R. (2012). The influence of teacher participation in decision-making on their occupational morale. *International Journal of Research in Social Science, 31*(3), 361-369.

Kothari, C. R. (2004). *Research Methodology*. New Delhi.

Mapunda, A. S. (2011). *The Effect of Large Class Size on Quality Education in Primary Schools: The Case of Ilala Municipal* (Dissertation, University of Dar es Salaam, Tanzania).

McCabe, A., & O'Connor, U. (2014). Student-centered learning: The role and responsibility of the lecturer. *Teaching in Higher Education, 19*(4), 350-359.

Mercy, O., & Ujiro, I. (2012). Influence of teachers' participation in decision making on their job performance in public and private secondary schools in Oredo Local Government area of Edo State, Nigeria. *European Journal of Business and Social Sciences, 1*(5), 12-22.

Momanyi, C. (2021). Effect of teaching management strategies on academic performance of secondary schools in Nyamira County: A focus of Manga Sub County. *African Journal of Emerging Issues, 3*(2), 11-30.

Moradia, S., Hussin, S. B., & Barzegarc, N. (2012). School-based management (SBM): Opportunity or threat. In *International Conference on Education and Educational Psychology* (pp. 1-8). Elsevier.

Mupa, P., & Chinooneka, T. I. (2015). Factors contributing to ineffective teaching and learning in primary schools: Why are schools in decadence? *Journal of Education and Practice, 6*(19), 125-132.

Mutia, C. N. (2018). *Administrative Factors Influencing Performance of Girls in Kenya Certificate of Secondary Education in Mixed Day Secondary Schools in Nzambani Sub-County, Kitui County, Kenya* (Doctoral dissertation).

Mwangi, M. M. (2014). *Influence of Principals' Instructional Supervision Practices on Students' Performance in Kenya Certificate of Secondary Education in Matuga District, Kenya* (Doctoral dissertation, University of Nairobi).

Nandwa, P. (2020). *Teaching Practices and Their Impact on Academic Achievement in Public Secondary Schools in Kakamega County*. Kakamega University Press.

Nganga, D. G. (2011). *Effects of Teaching/Learning Resources and Educational Achievement of Pupils: A Case Study of Selected Primary Schools in Shamata Zone, Nyandarua North District* (Thesis, Kampala International University).

Njeru, M., & Wambugu, P. (2021). The role of teachers' instructional practices in student academic performance in East Africa. *East African Journal of Education, 3*(1).

Nunnally, J. C. (1978). *Psychometric Theory* (2nd ed.). McGraw-Hill.

Nzoka, J. T., & Orodho, J. A. (2014). School management and students' academic performance: How effective are strategies being employed by school managers in secondary schools in Embu North District, Embu County, Kenya? *International Journal of Humanities and Social Science, 4*(9), 86-99.

OECD. (2018). *Effective Teacher Policies: Insights from PISA*. OECD Publishing.

Olatunji, F. O., & Bature, A. I. (2019). The inadequacy of post-development theory to the discourse of development and social order in the Global South. *Social Evolution & History, 18*(2), 229-243.

Orodho, J. A. (2018). Effectiveness of quality education in public secondary schools in Kenya. *International Journal of Education and Research, 6*(6), 15-27.

Republic of Kenya. (2012). *The Sessional Paper, No. 14 of 2012*. Government Printer.

Schwartz, A. (2012). Remedial education to accelerate learning for all. *GPE Working Paper Series on Learning*, 11, 1-65.

Soodmand Afshar, H., & Farahani, M. (2018). Inhibitors to EFL teachers' reflective teaching and EFL learners' reflective thinking. *Reflective Practice, 19*(1), 46-67.

Tsang, A. K. L. (2011). In-class reflective group discussion as a strategy for the development of students as evolving professionals. *International Journal for the Scholarship of Teaching and Learning, 5*(1).

UNESCO. (2015). *Education for All 2000-2015: Achievements and Challenges*. United Nations Educational, Scientific, and Cultural Organization.

Uwezo. (2013). *Are Our Children Learning? Literacy and Numeracy Across East Africa.* Uwezo East Africa Report 2012.

Wachanga, S. W., & Mwangi, J. G. (2004). Effects of the cooperative class experiment teaching method on secondary school students' chemistry achievement in Kenya's Nakuru district. *International Education Journal*, *5*(1), 26-36.

Wanjohi, A. M., & Yara, P. O. (2017). Performance in Kenya Certificate of Secondary Education examination and its relationship with students' choice of degree program. *Journal of African Studies in Educational Management and Leadership*, *7*(1), 36-46.

Wekesa, A., & Shikuku, R. (2019). Teacher preparedness and student academic achievement in Kakamega County, Kenya. *Western Kenya Education Journal*, *23*(2).