

# The Effect of Lesson Planning on Academic Performance Among Pupils in Mixed Public Primary Schools in Kisumu County, Kenya

 Ochwada Youanita Etale

Department of Curriculum Instruction, School of Education, University of Eldoret, P.O. Box 1125, Eldoret Kenya

## Abstract

Academic performance is a key indicator of educational success, influenced by numerous student, teacher, and environmental factors. Despite acknowledged benefits of teacher preparation, variability in pupil performance persists in public primary schools in Kisumu County, Kenya. This study aimed to examine the influence of lesson planning on academic performance among pupils in mixed public primary schools in this region. Guided by Walberg's Theory of Educational Productivity, which posits that academic achievement is influenced by a combination of student, instructional, and environmental factors, the study focused on the instructional characteristic of lesson planning. Descriptive research design and quasi-experimental design was employed. Data was collected from teachers (N=175 survey) and pupils (N=56 survey; N=20 experimental, 10 per group) in Kisumu County through questionnaires and pre-test/post-test assessments. Quantitative data were analyzed using descriptive statistics and independent samples t-tests, with significance set at  $p < 0.05$ . Baseline equivalence for the experimental groups was established via pre-test comparison. Results indicated that teachers held overwhelmingly positive perceptions of lesson planning regarding instructional effectiveness, confidence, time management, syllabus coverage, and varied strategies (Mean scores  $> 4.0$  on a 5-point scale). Pupils also reported positive perceptions, associating teacher planning with improved understanding, organization, topic completion, and exam performance (Mean scores  $> 3.8$ ). In the quasi-experimental component, the experimental and control groups showed no significant difference in pre-test scores ( $p=0.46$ ). However, the experimental group (Mean=68.3, SD=5.1) scored significantly higher than the control group (Mean=54.6, SD=6.9) on the post-test ( $t=0.84$ ,  $p=0.03$ ). The findings demonstrate a strong positive influence of lesson planning, supported by both perceptual data from teachers and pupils, and empirical evidence of improved academic performance. It is recommended that school administration and educational leadership prioritize supporting teachers' lesson planning efforts through dedicated time, resources, and professional development to leverage its positive impact on student achievement.

**Keywords:** Lesson planning, academic performance, pupils, teachers' perceptions, Kisumu County, Kenya

---

**Journal ISSN:** 2960-2602

**Journal DOI:** <https://doi.org/10.69897/joret.v3i1>

**Correspondence:** [youanitaochwada45@gmail.com](mailto:youanitaochwada45@gmail.com)

**Copyright** © 2025 Ochwada. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY).

**Funding:** The author received no financial support for the research, authorship and/or publication of this article.

**Data Availability Statement:** The authors confirm that the data supporting the findings of this study are available within the article [and/or] its supplementary materials.

**Competing interests:** The authors declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

## Introduction

Academic performance is the key to educational success, serving as a vital indicator of student learning and the efficacy of teaching strategies (Ali, Ghaffar & Shahzad, 2024; Nyagosia, Waweru & Njuguna, 2013). However, academic performance is not a simple consequence of instruction alone; rather, it is shaped by a wide variety of interacting factors that create a complex learning ecosystem (Pillai et al., 2019; Tabe, 2023). These influential factors include students' characteristics such as their intellectual level, specific cognitive abilities like working memory and reasoning capacity, pre-existing personality traits, levels of motivation and engagement, specific skills and interests, established study habits, and self-esteem (Gatundu, 2023; Mutua, 2023). Emotional intelligence has also been identified as playing a role in academic outcomes. Beyond individual student attributes, broader contextual factors are also highly significant, encompassing the student's

socioeconomic status (SES), the level of family support and expectations, and various environmental influences (Song & Killian, 2023; Sanni, 2024). Furthermore, the nature of the teacher-student relationship is a critical interpersonal factor, and the specific teaching methods employed by educators, alongside the expectations they hold for their students, also contribute significantly to performance outcomes (Zhang, 2022).

A study conducted at the elementary level by Khan, Siraj and Ilyas (2024) found a direct positive impact of lesson planning on student academic performance. The research indicated that an experimental group where teachers implemented systematic lesson planning strategies showed significantly higher post-test performance and a notable improvement from pre-test to post-test scores compared to a control group. This suggests that structured lesson planning can effectively enhance student academic achievement. Mirza et al. (2022) found that students tend to pay better attention when teachers plan their lessons well. This

implies that lesson plans that are well-structured, engaging, and cater to student needs are more likely to yield positive academic results.

In Kenya, as in many nations, primary education lays the foundational literacy and numeracy skills crucial for future learning and societal development (Thukia, 2025). The pursuit of quality education, as enshrined in national policies and international development goals like Sustainable Development Goal 4, necessitates a continuous examination of factors that influence student performance (Kinuthia, 2023; Thukia, 2025). Among these factors, teacher preparedness and the strategic execution of lessons are paramount. Central to this preparedness is lesson planning, a systematic process of outlining learning objectives, selecting appropriate teaching methods, and preparing assessment strategies, widely recognized as a fundamental component of effective teaching (Nor, Hizriani & Kadariyah, 2022; De Vera et al., 2021). In a study focusing on secondary schools in Kwale County, Kenya, Mboko, Kithinji and Mutunga, (2023) investigated the influence of teacher planning, including the use of professional documents like schemes of work and lesson plans, on students' academic performance in the Kenya Certificate of Secondary Examinations (KCSE). Using regression analysis, the study found that teacher planning accounted for a significant portion (36.3%) of the variance in students' academic performance. Fundamentally, lesson planning is the instructor's detailed "road map" that outlines what students are expected to learn and how this learning will be effectively facilitated during designated class time (FaqeAbdulla, 2024; Osok, 2024). The role of lesson planning extends beyond mere procedural compliance; it is intrinsically linked to the quality of instruction and, consequently, to student

engagement and achievement. When teachers invest time in thoughtful lesson preparation, they are better equipped to anticipate student needs, differentiate instruction to cater to diverse learners, and create a conducive learning environment (Manzoor, Tufail & Hayat, 2024). This proactive approach can lead to more coherent and engaging lessons, which in turn can promote deeper understanding and improved retention of information among students.

Despite the acknowledged benefits of lesson planning, variability in academic performance among pupils in public primary schools, particularly in Kisumu County, remains a concern (KNEC, 2022). Such variations in performance suggest that instructional practices, which are significantly shaped by lesson planning, might not be optimally tailored to support the diverse learning needs of all pupils (UNESCO, 2021). The cognitive synthesis involved in planning critical thinking, anticipating challenges, and selecting strategies (Orodho et al., 2016) profoundly impacts teaching effectiveness. Therefore, understanding how these planning processes influence the academic outcomes of all pupils is essential. This study, therefore, seeks to examine the influence of lesson planning on the academic performance of pupils within mixed public primary schools in Kisumu County.

## Theoretical Framework

This study was guided by the theory of Educational Productivity by Walberg (1981). It departs from singular explanations, proposing instead that educational success stems from an intricate combination of multiple factors concerning the student, the methods of teaching, and the overall learning context (Walberg, 1981). This theory, noted for

being grounded in an extensive synthesis of thousands of empirical studies (DiPerna et al., 2002; Walberg, 1984), posits that optimizing these various factors can lead to enhanced academic achievement and other desired educational outcomes. The theory fundamentally assumes that academic learning is an individual activity that largely occurs within the social contexts of the classroom, home, and peer groups (Walberg, 1984).

Central to Walberg's framework are nine principal factors identified as having a substantial effect on educational productivity (Walberg, Fraser, & Welch, 1986). These elements are organized into three main categories: student aptitude, characteristics of instruction, and environmental factors. Student aptitude pertains to the inherent qualities of the learner. This includes Ability/Prior Achievement, which signifies the student's pre-existing knowledge base, skills, and cognitive capacity, serving as a significant indicator of future learning. Another element is Motivation, which covers the student's drive to learn, their engagement with the subject, and their resilience when facing academic hurdles; students who are motivated tend to be more deeply involved in their education. Finally, Age/Developmental Level acknowledges the role of cognitive and emotional maturation in shaping how students comprehend information and what they are ready to learn at various life stages (Walberg, 1981; Walberg et al., 1986).

The second classification, instructional characteristics, centers on the direct aspects of teaching and learning. This includes the Quantity of Instruction, which relates to the time dedicated to educational activities and the breadth of material covered; generally, more active learning time correlates with improved outcomes, provided other conditions are favorable. Quality of Instruction is a

complex factor encompassing the lucidity of teaching, the suitability of instructional strategies, the effectiveness of feedback, and the teacher's overall proficiency in guiding the learning experience (Walberg, 1981; Walberg et al., 1986).

The third set of influences, termed environmental factors, underscores the significant impact of the settings in which learning occurs, both inside and outside of formal schooling. The Classroom Climate refers to the psychosocial dynamics of the learning space, such as the quality of interactions between teachers and students and among students themselves, the degree of structure and encouragement, and the general classroom atmosphere; a nurturing and organized environment is vital for learning. The Home Environment involves parental engagement in learning, the availability of intellectual resources at home, and familial educational values, all of which can substantially support a student's academic journey. The Peer Group also plays a role, as the attitudes and actions of a student's peers can greatly influence their academic focus and goals. Lastly, Exposure to Mass Media, particularly how leisure time is spent, such as television viewing, was noted in Walberg's original model for its potential to divert time and attention from educational activities if not managed constructively (Walberg, 1981; Walberg et al., 1986).

A key tenet of Walberg's theory is the interactive and often multiplicative relationship between these factors. This implies that strength in one area can sometimes offset weaknesses in another (Haertel, Walberg, & Weinstein, 1983). Conversely, a significant deficiency in an essential component, such as student motivation or the quality of teaching, can severely impede learning, even if other elements are positive.

## Methodology

The study was grounded in the pragmatism paradigm, which emphasizes practical solutions to real-world problems (Mackenzie & Knipe, 2006). Pragmatism aligns with this research as it allows for the integration of both qualitative and quantitative methods to explore how lesson planning influences academic performance among boys and girls. Pragmatists argue that knowledge is derived from experience and that research should focus on actionable outcomes.

This study adopted both descriptive survey and quasi-experimental approaches. The descriptive survey design was used to gather perceptions, attitudes, and experiences of teachers and students regarding lesson planning and its impact on academic performance.

In addition, a quasi-experimental design was adopted to measure the actual effect of structured lesson planning on learners' academic achievement. Specifically, a pre-test-post-test control group design was utilized. This allowed comparison between pupils exposed to structured lesson plans (experimental group) and those who followed standard teaching practices without a structured lesson plan (control group).

The study was carried out in Kisumu County, Kenya, chosen due to its persistent academic performance challenges and gender disparities in educational outcomes. Kisumu County lies between longitudes 33°20'E and 35°20'E and latitudes 0°20'S and 0°50'S, bordering several counties including Homa Bay, Nandi, Kericho, Siaya, and Vihiga. It has a population of approximately 1.15 million people and hosts a mix of urban and rural public primary schools. Kisumu County comprises seven sub-counties: Kisumu Central, Kisumu East, Kisumu West,

Muhoroni, Nyakach, Nyando, and Seme. These sub-counties exhibit variations in school resources, staffing, and learner performance, making the area ideal for examining disparities in lesson planning and academic performance.

The target population comprised teachers and learners drawn from the 585 mixed public primary schools in Kisumu County. Specifically, it included 585 Class Eight subject teachers and 585 pupils (both boys and girls) who were candidates for the 2022 Kenya Certificate of Primary Education (KCPE) examination.

Following Mugenda and Mugenda's (2006) recommendation that 10–30% of the population suffices for descriptive studies, this study sampled 30% (175 schools). Additionally, 56 pupils (8 per sub-county). The breakdown of the sample is summarized in Table 1.

A multi-stage sampling technique was applied. First, stratified sampling was used to group the schools into the seven sub-counties. This ensured geographical and demographic representation. Within each stratum, simple random sampling was used to select the schools.

Purposive sampling was used to select one head teacher, one class teacher, and one subject teacher per school. For the experimental component, 56 Class Eight pupils (8 from each sub-county, both boys and girls) and their parents were selected using both purposive and random sampling methods. Pupils were assigned to control or experimental groups based on their pre-test performance to ensure comparable baseline academic ability.

Structured questionnaires were administered to Class Eight subject teachers and selected pupils. These consisted of both open and closed-ended questions designed to capture data on perceptions and observed outcomes of lesson planning.

Table 1: Sample size determination

No.	Sub-County	Schools in Sub-County	Sample (%)	Sample Size
1	Kisumu Central	29	1%	6
2	Kisumu East	47	2%	12
3	Kisumu West	81	4%	23
4	Muhoroni	80	4%	23
5	Nyakach	144	8%	47
6	Nyando (incl. Kadibo)	98	5%	29
7	Seme	106	6%	35
Total		585	30%	175

To complement the descriptive survey, the study incorporated a quasi-experimental design to determine the causal effect of structured lesson planning on pupils’ academic performance. One school was selected where two groups of each 10 Class Eight pupils were involved: an experimental group and a control group. The experimental group comprised pupils whose teachers implemented systematically structured lesson plans during instruction. These lesson plans were aligned with curriculum objectives and incorporated clear learning outcomes, teaching aids, varied instructional strategies, and assessment methods. The control group, on the other hand, consisted of pupils taught by teachers who continued with their usual, routine instructional practices without structured lesson planning interventions.

Both groups were subjected to pre-test and post-test assessments in English to evaluate any changes in performance. The pre-test was administered before the intervention to establish a baseline of academic performance, while the post-test was given after a specified instructional period. This approach enabled the researcher to compare the academic gains made by pupils in both groups, thus determining the effectiveness of structured lesson planning

in enhancing learners’ academic achievement.

Establishing the validity of research instruments is crucial to ensure that the study measures what it intends to measure. The study employed content and construct validity to validate the research tools. Content validity was ensured through a thorough supervisors expert review process. The experts assessed whether the items adequately covered the study's key constructs related to lesson planning and academic performance. Their feedback led to refinements in question wording, elimination of ambiguous items, and addition of critical indicators that were initially overlooked.

Construct validity was achieved by carefully aligning all measurement items with the specific research objectives and theoretical framework. The instruments underwent factor analysis during pilot testing to verify that they measured the intended theoretical constructs (e.g., quality of lesson plans, teaching effectiveness, student performance). This alignment between operational measures and theoretical constructs strengthened the study's ability to draw meaningful conclusions about the relationship between lesson planning and academic outcomes.

Reliability refers to the consistency and stability of research instruments in producing similar results under consistent conditions. The test-retest method was implemented by administering the instruments twice to the same group of 30 participants (teachers and students) in Siaya County, with a two-week interval between administrations. The high correlation coefficient ( $r = 0.82$ ) between the two sets of responses indicated strong temporal stability of the instruments. This pilot study also served to identify and rectify any ambiguous or problematic items before full-scale data collection.

Internal consistency of the Likert-scale items was assessed using Cronbach's alpha coefficient. All scales demonstrated excellent reliability, with  $\alpha$  values ranging from 0.78 to 0.86, well above the recommended threshold of 0.7 (Tavakol & Dennick, 2011). Particularly strong reliability ( $\alpha = 0.84$ ) was observed for the lesson planning quality scale, suggesting that items measuring this construct were highly interrelated. These reliability tests confirmed that the instruments produced consistent measurements across different items designed to assess the same underlying construct.

Quantitative data from questionnaires and academic scores were analyzed using SPSS Version 23. Descriptive statistics (frequencies, percentages, means) and inferential statistics (independent samples t-test, paired samples t-test, and ANOVA) were used to compare performance across groups.

The independent samples t-test was used to determine significant differences in academic performance between the experimental and control groups. The paired samples t-test assessed performance change within the experimental group from pre-test to post-

test. Statistical significance was established at  $p < 0.05$ .

Results and Discussion

Demographic characteristics of teachers

The study collected data from a sample of 175 Class Eight subject teachers across mixed public primary schools in Kisumu County. The findings on their socio-demographic characteristics are presented in Table 2.

Gender distribution

The majority of the teachers were female, accounting for 102 (58.3%) of the respondents, while 73 (41.7%) were male. This reflects the national trend in Kenya where the teaching profession, especially at the primary school level, is female-dominated.

Age bracket

Teachers were fairly distributed across different age groups. The age group of 31–40 years had the highest representation with 68 teachers (38.9%), followed by the 41–50 years group with 52 teachers (29.7%). Those aged 20–30 years constituted 29 (16.6%), while 26 teachers (14.8%) were aged above 50 years. This distribution indicates a relatively experienced and mature teaching workforce.

Highest professional qualification

In terms of academic qualification, 74 teachers (42.3%) held a Diploma, making it the most common qualification among the respondents. P1 certificate holders were 49 (28%), while 41 teachers (23.4%) had a Bachelor of Education (B.Ed.) degree.

Table 2: Demographic characteristics of teachers (n = 175)



Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	96	54.9%
	Female	79	45.1%
Age Bracket	20–30 years	22	12.6%
	31–40 years	55	31.4%
	41–50 years	64	36.6%
	Above 50 years	34	19.4%
Professional Qualification	P1	43	24.6%
	Diploma	68	38.9%
	B.Ed	49	28.0%
	M.Ed	15	8.6%
Subjects Taught	Mathematics	102	58.3%
	English	89	50.9%
	Kiswahili	83	47.4%
	Science	95	54.3%
	Social Studies/RE	87	49.7%
Teaching Experience	Less than 5 years	18	10.3%
	5–10 years	41	23.4%
	11–15 years	57	32.6%
	16–20 years	33	18.9%
	Over 20 years	26	14.9%

A smaller group of 11 teachers (6.3%) possessed a Master of Education (M.Ed.) degree, reflecting a modest level of advanced professional training.

Subjects Taught

Subject specialization was fairly balanced. English and Kiswahili were the most commonly taught, with 123 (70.3%) and 119 (68%) teachers respectively indicating they taught these subjects. Mathematics followed closely with 107 (61.1%) teachers, while 93 (53.1%) taught Science and 86 (49.1%) taught Christian Religious Education (CRE). Many teachers taught more than one subject, which is typical in primary school settings.

Teaching experience

The study revealed that a significant number of teachers had

extensive teaching experience. About 56 (32%) had over 20 years of teaching experience, while 45 (25.7%) had 11–15 years of experience. Those with 5–10 years constituted 39 (22.3%) and those with less than 5 years were 21 (12%). Only 14 teachers (8%) had been teaching for 16–20 years. This suggests a highly experienced group, with most teachers having worked long enough to be well-versed in curriculum delivery and classroom management.

Demographic characteristics of pupils

The study also gathered demographic information from a sample of 175 Class Eight pupils who were 2022 KCPE candidates across mixed public primary schools in Kisumu County. The findings are summarized in Table 4.

Table 4: Demographic characteristics of pupils (n = 56)



Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	29	51.8%
	Female	27	48.2%
Age	12 years	9	16.1%
	13 years	17	30.4%
	14 years	15	26.8%
	15 years	11	19.6%
	16 years and above	4	7.1%

Gender distribution

The study collected demographic data from a sample of 56 Class Eight pupils who were 2022 KCPE candidates in mixed public primary schools in Kisumu County. The findings reveal a balanced gender distribution, with 29 male pupils (51.8%) and 27 female pupils (48.2%). This near-equal representation ensures a reliable basis for comparing academic performance between boys and girls in relation to lesson planning.

Age distribution

In terms of age distribution, the majority of pupils (57.2%) fell within the 13–14-year-old range, which is the typical age for Class Eight candidates in Kenya. Specifically, 17 pupils (30.4%) were 13

years old, while 15 pupils (26.8%) were 14 years old. Younger pupils aged 12 years accounted for 16.1% (9 pupils), whereas older pupils 15 years and above made up 26.7% of the sample (11 pupils aged 15 and 4 pupils aged 16 or older). The presence of pupils above the expected age range suggests possible late school entry or grade repetition, a common observation in many Kenyan public primary schools.

Perception of teachers on lesson planning and instructional effectiveness

To assess teachers' perceptions, a 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree) was used on five key statements. The findings are presented in Table 5.

Table 5: Teachers’ perceptions of lesson planning

Statement	SD	D	N	A	SA	Mean	Std. Dev
Lesson planning helps me deliver lessons effectively	0	6	12	70	88	4.36	0.76
I feel confident with a prepared lesson plan	0	0	12	76	88	4.43	0.62
Lesson planning allows me to manage time well	6	12	18	64	76	4.09	1.05
Planning lessons helps cover the syllabus on time	0	12	12	82	70	4.19	0.84
I use varied strategies in my lesson plans	0	6	23	88	58	4.13	0.77

Based on the data presented in Table 5, teachers generally hold positive perceptions regarding the impact of lesson planning on their instructional effectiveness. Teachers strongly agreed that lesson planning helps me deliver

lessons effectively (Mean=4.36, SD=0.76. This suggests that, on average, teachers strongly agree that lesson planning is beneficial for effective lesson delivery, with relatively low variability in responses. Similarly, teachers strongly agreed that

they feel confident with a prepared lesson plan (Mean=4.43, SD=0.62). This finding indicates a strong consensus among teachers that having a lesson plan in hand significantly boosts their confidence in the classroom. The data also indicates that teachers perceive lesson planning as a valuable tool for time management and syllabus coverage. The statement "Lesson planning allows me to manage time well" yielded a mean of 4.09 with a standard deviation of 1.05. While still indicating agreement, the slightly lower mean and higher standard deviation compared to the first two statements suggest a bit more variation in how strongly teachers feel that lesson planning helps with time management. Regarding syllabus coverage, the statement "Planning lessons helps cover the syllabus on time" had a

mean of 4.19 and a standard deviation of 0.84, indicating a strong agreement among teachers that planning facilitates timely syllabus completion, with a moderate spread in opinions. Finally, teachers generally agree that they incorporate varied strategies in their lesson plans (Mean=4.13, SD=0.77). This suggests that a majority of teachers believe they utilize diverse approaches when planning their lessons.

Perception of pupils on influence of lesson planning on classroom processes

A student-focused 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to assess pupils' perceptions of how lesson planning influences classroom learning. The findings are presented in Table 6.

Table 6: Pupils views on teacher lesson planning

Statement	SD	D	N	A	SA	Mean	Std. Dev
My teacher uses a lesson plan every day	3	5	6	19	23	4.00	1.08
I understand better when the teacher uses a lesson plan	2	3	5	22	24	4.21	0.95
I am more interested when the teacher is organized	4	3	8	22	19	3.88	1.03
We complete more topics when the teacher follows a lesson plan	2	4	6	23	21	4.11	0.92
I perform better in exams with well-organized lessons	1	4	5	21	25	4.24	0.89

Results presented in Table 6 indicated that majority of pupils agreed that their teacher uses a lesson plan every day (Mean=4.0, SD=1.08). This indicates that, on average, students perceive lesson planning as a regular practice by their teachers. Furthermore, majority of students agreed that they understand better when the teacher uses a lesson plan (Mean=4.21, SD=0.95). This high mean suggests a strong agreement among pupils that a teacher's use of a lesson plan enhances their comprehension of the subject matter. Similarly, pupils agreed

that they are more interested when the teacher is organized (Mean= 3.88, SD=1.03). While the mean is slightly lower than for understanding, it still indicates a general agreement that teacher organization positively impacts student interest, with a moderate spread in responses. The pupils also perceived a link between lesson planning and the pace of covering the curriculum, as well as their own academic performance (Mean=4.11, SD=0.92), suggesting that pupils believe adhering to a lesson plan facilitates more comprehensive coverage of topics. Pupils

also agreed that they perform better in exams with well-organized lessons (Mean=4.24, SD=0.89). This indicates a strong conviction among students that structured and planned lessons positively influence their academic performance.

**Quasi-Experimental analysis of lesson planning effects**

This study employs a quasi-experimental design to investigate the effects of lesson planning on pupils performance. Unlike true experimental designs where participants are randomly assigned to groups, quasi-experimental studies work with pre-existing groups or situations where random assignment is not feasible or ethical. A critical initial step in such studies is to assess whether the groups being compared are similar on relevant characteristics *before* any intervention takes place. This initial assessment helps ensure that any differences observed *after* the intervention can be more confidently attributed to the intervention itself, rather than pre-existing disparities between the groups.

**Pre-Test performance (baseline equivalence)**

Table 7 presents the descriptive statistics and the result of a statistical test comparing the baseline performance of the two groups involved in the study: the Experimental group and the Control group. The purpose of examining pre-test scores is to determine if the groups were reasonably equivalent in terms of the measured variable *before* the lesson planning intervention was implemented. Establishing baseline equivalence is crucial in quasi-experimental research to strengthen the internal validity of the study and support causal inferences about the intervention's effects. The table provides the sample size (N), the mean score and standard deviation (SD) for each group's

pre-test, and the result of an independent samples t-test conducted to assess the statistical significance of the difference between the two group means.

**Table 7:** Pre-Test scores comparison (experimental vs. control group)

Group	N	Mean Score (SD)	t-test value	(p-value)
Experimental	10	52.4 (6.8)	0.75	(p = 0.46)
Control	10	50.9 (7.2)		

As shown in Table 7, the pre-test scores were collected for both the Experimental group and the Control group. Each group consisted of 10 participants (N=10). The Experimental group achieved a mean pre-test score of 52.4 with a standard deviation of 6.8, while the Control group had a mean pre-test score of 50.9 with a standard deviation of 7.2. To formally assess if the observed difference in mean pre-test scores between the groups was statistically significant, an independent samples t-test was conducted. The results of the t-test yielded a t-statistic of 0.75 with an associated p-value of 0.46. Given a conventional significance level (alpha) of 0.05, the obtained p-value of 0.46 is considerably greater than 0.05. This indicates that there is no statistically significant difference in the mean pre-test scores between the Experimental and Control groups. This approach mirrors the methodology of the Tusome Early Grade Reading Intervention in Kenya, which utilized a cluster-randomized design to evaluate the impact of structured lesson plans and teacher support on literacy outcomes. The study reported significant improvements in student learning, attributing gains to the structured instructional approach (Piper, Destefano & Kinyanjui, 2018).

Post-Test performance (intervention effects)

Table 8 presents the post-test performance of the Experimental and Control groups, serving as a key measure to evaluate the potential effects of the lesson planning intervention. Following the pre-test assessment, this table provides data on student outcomes *after* the intervention period. It includes the pre-test mean scores (re-iterated for comparison), the post-test mean scores and standard deviations for both groups, and the results of an independent samples t-test conducted to compare the post-test means.

Table 8: Post-Test scores

Group	Pre-Test Mean (SD)	Post-Test Mean (SD)	t-test (p-value)
Experimental	52.4 (6.8)	68.3 (5.1)	0.84 (p = 0.03)
Control	50.9 (7.2)	54.6 (6.9)	

The Experimental group, which participated in the lesson planning intervention, achieved a mean post-test score of 68.3 with a standard deviation of 5.1. In contrast, the Control group, which did not receive the intervention, had a mean post-test score of 54.6 with a standard deviation of 6.9. When compared to their respective pre-test means (Experimental: 52.4, Control: 50.9), both groups showed an increase in scores, but the Experimental group's increase was notably larger. To determine if the difference observed in post-test means between the Experimental and Control groups was statistically significant, an independent samples t-test was performed. The test yielded a p-value of 0.03. These findings are consistent with a study conducted by Kariuki, Njoka and

Mbugua (2019) in the Aberdares region, which examined the influence of teachers' lesson preparation on pupils' mathematics performance. The study found that pupils taught by teachers who prepared lesson plans scored higher (Mean = 63.9, SD = 6.31) than those whose teachers did not (Mean = 57.3, SD = 8.01), underscoring the positive impact of lesson planning on academic achievement.

Conclusion and Recommendation

The perception data revealed that teachers hold overwhelmingly positive views, strongly believing that lesson planning enhances their instructional effectiveness, significantly boosts their confidence in the classroom, aids in effective time management and timely syllabus coverage, and encourages the use of varied teaching strategies. This indicates that teachers recognize the practical benefits of preparation for their own practice and professional well-being.

Corroborating the teachers' views, pupils also reported positive perceptions regarding their teachers' lesson planning efforts. Pupils generally perceived that their teachers regularly use lesson plans and that this practice leads to improved understanding, greater interest (associated with teacher organization), more comprehensive topic coverage, and ultimately, better performance in exams. These findings suggest that the benefits of teacher preparation are noticeable and appreciated by the students themselves, translating into a more conducive learning environment from their perspective.

The quasi-experimental analysis provided empirical evidence supporting the positive influence of lesson planning on student outcomes. Despite starting with statistically equivalent baseline performance (as shown by the non-

significant difference in pre-test scores), the group that received the lesson planning intervention demonstrated a statistically significant improvement in post-test scores compared to the control group. This finding strengthens the inference that the intervention, centered around structured lesson planning, directly contributed to enhanced student academic achievement. The study therefore recommends that school administration and educational leadership should recognize lesson planning as a core component of effective teaching and allocate dedicated time within the school day or week specifically for this purpose. Reducing administrative burdens that detract from planning time and providing conducive environments for planning are essential.

## References

- Ali, A., Ghaffar, A., & Shahzad, S. (2024). Impact of Teaching Strategies on the Academic Performance of Students at Primary Level in District Buner. *International Journal of Social Science Archives (IJSSA)*, 7(1). [https://openurl.ebsco.com/EPDB%3Agcd%3A7%3A2971799/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A176421211&crl=c&link\\_origin=scholar.google.com](https://openurl.ebsco.com/EPDB%3Agcd%3A7%3A2971799/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A176421211&crl=c&link_origin=scholar.google.com)
- De Vera, J. L., Andrada, M. D., Bello, A., & De Vera, M. G. (2021). Teachers' competencies in educational technology integration on instructional methodologies in the new normal. *Lukad: An Online Journal of Pedagogy*, 1(1), 61-80.
- DiPerna, J. C., Volpe, R. J., & Elliott, S. N. (2002). A model of academic enablers and elementary reading/language arts achievement. *School Psychology Review*, 31(3), 298-312. <https://doi.org/10.1080/02796015.2002.12086157>
- FaqeAbdulla, B. I. (2024). Analyzing the structure and effectiveness of lesson plans for pre-service English language teachers. *International Journal of English Learning and Applied Linguistics (IJELAL)*, 4(2), 143-162.
- Gatundu, G. W. (2023). *Influence of school environment on academic self-concept among primary school pupils in informal settlements of Kibra Sub-County, Nairobi County, Kenya* (Doctoral dissertation). <http://41.89.101.166:8080/handle/123456789/15674>
- Haertel, G. D., Walberg, H. J., & Weinstein, T. (1983). Psychological models of educational performance: A theoretical synthesis of constructs. *Review of Educational Research*, 53(1), 75-91. <https://doi.org/10.3102/00346543053001075>
- Kariuki, L. W., Njoka, J. N. and Mbugua, Z. K. (2019). Influence of Teachers Preparedness on Performance of Pupils in Mathematics in Lower Primary Schools in Aberdares Region of Kenya. *European Journal of STEM Education*, 4(1), 01. <https://doi.org/10.20897/ejsteme/3931>
- Kenya National Examinations Council (KNEC). (2022). *Annual Report on Primary School Performance*. Nairobi: KNEC.
- Khan, S., Siraj, D., & Ilyas, Z. (2024). Effect of lesson planning on academic performance: Evidence from the elementary level classroom. *Pakistan Social Sciences Review*, 8(1), 169-177.
- Kinuthia, C. N. (2023). Re-imaging inclusive education: analysing the gap between theory and practice in the Kenyan education system: a case study of primary schools vis-à-vis policy documents. <https://repo.uni-hannover.de/handle/123456789/13830>
- Manzoor, A. A., Tufail, N., & Hayat, K. (2024). Exploring the Role of Lesson Planning on Prospective Teacher Professional Skills at the University of Narowal: A Qualitative Research Study. *Qlantic Journal of Social Sciences*, 5(2), 66-75.
- Mboko, C. W., Kithinji, W., & Mutunga, S. L. (2023). Influence of Teacher Planning on Students' Academic Performance in Kwale County, Kenya.
- Mirza, M. A., Khurshid, K., Shah, Z., Shah, F., Levula, A., & Klačnja-Milićević, A. (2022). Impact of lesson planning on students' achievement using learner profile system. In *Handbook on Intelligent Techniques in the Educational Process: Vol 1 Recent Advances and Case Studies* (pp. 121-143). Cham: Springer International Publishing.
- Mutua, A. W. (2023). *Influence of Pupils' Councils in Decision Making on Academic Performance in Kenya Certificate of Primary Education Examination in Kieni*

- West Sub-County, Nyeri County, Kenya (Doctoral dissertation, KeMU).
- Nor, H., Hizriani, N., & Kadariyah, N. L. (2022). Teachers' materials development, lesson planning, and teaching skills readiness in teaching English. *PANYONARA: Journal of English Education*, 4(1), 32-64. <https://ejournal.iainmadura.ac.id/index.php/panyonara/article/view/5909>
- Nyagasia, P. O., Waweru, S. N., & Njuguna, F. W. (2013). Factors influencing academic achievement in public secondary schools in Central Kenya: An effective schools' perspective. *Educational Research International*, 2(2), 174-184. <https://ir-library.ku.ac.ke/server/api/core/bitstream/s/08231331-5d9c-46f8-ab89-09fc883f445e/content>
- Osok, Y. I. (2024). *Exploring The Phenomena Of Lesson Planning Among English Techer (A Case Study In Private School At Sorong Regency)* (Doctoral dissertation, Universitas Pendidikan Muhammadiyah Sorong).
- Pillai, K. R., Upadhyaya, P., Balachandran, A., & Nidadavolu, J. (2019). Versatile learning ecosystem: a conceptual framework. *Higher Education for the Future*, 6(1), 85-100.
- Piper, B., Destefano, J., Kinyanjui, E.M. (2018). Scaling up successfully: Lessons from Kenya's Tusome national literacy program. *J Educ Change* 19, 293–321 (2018). <https://doi.org/10.1007/s10833-018-9325-4>
- Sanni, A. B. (2024). *Social Class Factors, Academic Well-Being And Academic Achievement Of Public Secondary School Students In Ekiti State, Nigeria* (Doctoral dissertation, Doctoral Dissertation, University Of Ibadan).
- Song, L. K., & Killian, K. Y. (2023). Influence of familial socioeconomic status on academic outcomes in secondary education: A comparative study. *Education Science and Management*, 1(1), 43-57. <https://pdfs.semanticscholar.org/3a89/f8690c35e8007e4eb0f894a653ac17f7e1a8.pdf>
- Tabe, H. T. (2023). Teacher quality is a defining factor of student academic performance in schools: the case of a district in South Africa. <http://ul.netd.ac.za/handle/10386/4451>
- Thukia, W. J. (2025). Kenya's Education Reform: Embracing a New Learning Framework. *International Journal of Educational Reform*, 10567879251331218.
- UNESCO. (2021). *Global Education Monitoring Report: Gender Equality in Education*. Paris: UNESCO.
- Walberg, H. J. (1978). A Theory of Educational Productivity. <https://eric.ed.gov/?id=ED167462>
- Walberg, H. J. (1984, May). Improving the productivity of America's schools. *Educational Leadership*, 41(8), 19-27. <https://eric.ed.gov/?id=EJ299536>
- Walberg, H. J., Fraser, B. J., & Welch, W. W. (1986). A test of a model of educational productivity among senior high school students. *Journal of Educational Research*, 79(3), 133-139. <https://doi.org/10.1080/00220671.1986.10885664>
- Were, S. (2020). Gender disparities in KCPE performance: A Kisumu County study. *Kenya Journal of Educational Assessment*, 6(1), 33–49.
- Zhang, Q. (2022). The role of teachers' interpersonal behaviors in learners' academic achievements. *Frontiers in psychology*, 13, 921832. <https://doi.org/10.3389/fpsyg.2022.921832>