

Influence of Vandalism on Academic Performance of Students in Public Secondary Schools in Matungu Sub-County, Kenya

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ABSTRACT

This study looked into the relationship between academic achievement and student indiscipline in public secondary schools in Kenya's Matungu Sub-County. Examining the effects of vandalism of instructional materials was the main goal. Inspired by the social learning and the self-determination theories, the study employed a descriptive survey design that combined qualitative and quantitative techniques. The study's target population comprised of 16356 pupils, 327 class teachers, 42 guiding and counselling teachers, and 42 deputy principals. Deputy principals, guidance and counselling teachers, class teachers, and students made up the target group. Using stratified random sampling, 391 respondents were chosen as a sample. The sample size for the study, which was carried out at a single school, was determined using Slovin's formula. Interviews and questionnaires were used to obtain data. The data were analysed using descriptive statistics, such as means, frequencies, and percentages. Experts evaluated the questionnaire's validity, and the test-retest approach guaranteed its reliability. Data analysis was conducted using SPSS version 27.0.1, employing statistical methods such as regression analysis and percentage calculations. The findings suggest that a variety of leadership techniques must be used in tandem for efficient disciplinary management in educational settings. The study recommends that the Ministry of Education (MoE) and the Kenya Education Management Institute (KEMI) utilize these findings to enhance the in-service training of educational administrators. Additionally, it highlights the significant detrimental effect of vandalism on students' academic performance and advises schools to implement preventive measures such as improving security and fostering a culture of respect for school property. To address school vandalism and its impact on academic achievement, the study recommends implementing increased security measures and fostering respect for school property as preventive steps. This approach would provide a more comprehensive understanding of how indiscipline influences academic achievement over time.

Keywords: Academic Performance, Discipline, Indiscipline, School Vandalism

I. INTRODUCTION

Studies such as those conducted by Gottfredson et al (2024) have highlighted the negative repercussions of student indiscipline on academic performance. Indiscipline issues like absenteeism, disruptive behaviour, and misconduct not only affect the individual student but also disrupt the learning environment for others.

According to Mallett (2022), student misconduct in the classroom interferes with instruction and learning and is a risk factor for dropouts, grade repeat and poorer grades. There are various forms of school misconduct linked to poor academic achievement. These extend to cover the attendance of school, examination cheating, destroying teaching and learning resources, and non-completion of homework. As Makokha (2019) showed, in the world's most modern education system, secondary education is the best education to prepare one for university education. However, secondary education systems in most countries still face challenges such as learner indiscipline, impeding academic performance, and overall educational success (Njoroge & Nyabuto, 2017). The goal of the school's stakeholders, including administrators, teachers, students, parents, and accountable governments, is to lessen some of the difficulties that arise in the classroom.

Concerns about pupils' lack of discipline and how it affects their academic performance in public secondary schools have been raised in Kenya and study within the local context. Studies conducted by researchers such as Simatwa (2018) and Mutie and Ndambuki (2019) have explored various aspects of indiscipline among students in Kenyan secondary schools. These studies have identified multiple forms of indiscipline, including absenteeism, disobedience, bullying, exam cheating, substance abuse, and vandalism, among others. Indiscipline disrupts the learning environment, leading to decreased concentration, poor academic engagement, and compromised learning outcomes for both the undisciplined students and their peers (Simatwa, 2018; Mutie & Ndambuki, 2019). Schools like Kakamega High School, Lubinu Boys High School, and Koyonzo Boys have a dismal record when it comes to disciplinary issues in Kakamega County. Students from Koyonzo Boys in Matungu Sub County set fire to their grocery store in 2019, destroying twelve million shillings worth of property. (MoEST, 2020)

Table 1*Matungu Sub County Public Secondary Schools' Student Disciplinary Case Trend, 2019–2022*

Type of indiscipline	2019	2020	2021	2022
Students' Unrest	4	6	27	15
Pregnancies	135	226	309	240
Drug Abuse	72	96	212	385

Source: MoEST, 2023

In Kenya, the KCSE exam is typically used to evaluate secondary school pupils' academic performance. The performance of the students in this examination is important during their placement to high education and college or polytechnic courses (Lumosi & Mukonyi, 2018). This is because it dictates the career and future professions of the KCSE graduated learners. Between 2018 and 2023, the KCSE mean scores in Kakamega County have put Matungu Sub County in seventh position out of the 13 sub counties with Matungu having stagnated at a mean of D+ (plus) over the years (Table 2).

Table 2*Kakamega County Performance in KCSE Examinations 2018-2023*

S/NO	Sub County	2018	2019	2020	2021	2022	2023
1	Mumias West	4.628	4.8747	4.182	4.9244	5.094	5.286
2	Butere	4.0203	5.0522	5.3677	4.9351	4.858	5.12386
3	Likuyani	3.9486	4.711	4.8	4.8	4.3568	4.8238
4	Kakamega Central	4.11	4.6831	4.7036	4.7036	4.4757	4.5637
5	Kakamega South	3.648	4.5753	4.582	4.582	4.509	4.5379
6	Kakamega East	4.0917	4.5753	4.581	4.1287	4.43	4.527
7	Matungu	4.103	4.5304	4.606	4.463	4.4786	4.2498
8	Kakamega North	3.994	3.9794	4.341	3.88	4.242	4.195
9	Mumias East	3.7871	4.5030	4.3753	4.3753	4.4326	4.118
10	Matete	3.7182	4.1353	4.141	4.088	3.9015	4.0995
11	Khwisero	3.8665	4.3111	4.4343	4.43	4.454	4.07
12	Lugari	3.7543	4.0285	4.207	4.019	3.957	4.0593
13	Navakholo	3.3411	3.9560	4.221	3.498	4.0564	4.0266

Source: County Director of Education, Kakamega County

Additionally, the 2023 KCSE performance report from Advanced Africa indicates that students in a few sub-county schools performed relatively poorly. Moreover, this report indicated that most students failed to attain minimum university grade of C+ (Kimanthi, 2019). According to Matungu pupils' current academic standing, the majority are in a good position to enrol in technical institutes for vocational training or middle-level colleges for diploma courses. Therefore, there has been dismal performance as reported on Sub-county KCSE mean performance despite the huge allocation the government pumps in the sector yearly. The potential reason that could have led to this kind of performance is student indiscipline in schools; however, this has received limited attention. This gap prompted the researcher to investigate how Vandalism as a form of indiscipline affects their academic performance in public secondary schools within Matungu Sub-County.

1.1 Statement of the Problem

Student indiscipline continues to be a major problem in Kenyan public secondary schools, impacting academic performance and the overall quality of education. Extensive studies conducted by Simatwa (2018) and Mutie and Ndambuki (2019) have identified a range of disciplinary issues among students, including absenteeism, cheating, bullying, vandalism, and disobedience. These forms of indiscipline disrupt the learning environment and hinder academic progress, contributing to decreased academic achievement and increased dropout rates.

A report by the MoE in July, 2023 on indiscipline cases in schools indicated that Matungu Sub County had several cases of indiscipline and many strikes and class boycotts that occurred between 2019 and 2022 (Table 1). During the same period the KCSE mean scores in Matungu Sub-County have stagnated with the mean score oscillating between 4.5 in 2019 to 4.2 in 2023 (Table 2). The increasing cases of indiscipline are hindering the ability of Kenya to attain Vision 2030 and achievement of the SDGs. Although there are several variables associated with poor student performance, the issue of Vandalism has received less attention. In order to close this knowledge gap, the researcher sought to investigate the relationship between Vandalism and academic performance in public secondary schools located in the Matungu Sub-County. Even though more children have access to education, their academic

performance is still lacking. It was critical to ascertain whether their lack of discipline is a contributing factor to their poor performance, given the numerous reports of it.

1.2 Research Objective

To establish the influence of vandalism of teaching and learning resources on students' academic performance in public secondary schools in Matungu Sub County.

1.3 Research Question

How does vandalism of teaching and learning resources influence students' academic performance in public secondary schools in Matungu Sub County?

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Self-Determination Theory (SDT), Proposed by: Edward L. Deci and Richard M. Ryan (1985)

According to the self-determination theory, people become motivated when their psychological demands for relatedness, competence, and autonomy are met. According to the theory, students are more likely to exhibit positive academic outcomes when it comes to their indiscipline and academic performance if they feel autonomous in their learning, have opportunities to develop their competence, and have supportive relationships with peers and teachers (Guay, 2024).

2.1.2 Social Learning Theory

This study aimed to explore the impact of vandalism on instructional materials on academic performance in public secondary schools within Matungu Sub-County. The research was grounded in Albert Bandura's Social Learning Theory, which contrasts with B.F. Skinner's Behaviourism Theory (Loyalka, 2023). Students learn from their friends by imitation. When an opportunity to exhibit learnt behaviour arises, learners internalize and remember the exhibited traits, and the behaviour spreads among themselves based on the incentives and consequences attached to modelling such behaviour in the teaching and learning environment. According to this argument, students will, for example, cheat on exams since it is a learned behaviour in a classroom setting. In a similar vein, if other students are damaging the school's resources, a student can damage the teaching and learning materials. Simultaneously, because other students are not attending school, a student may exhibit nonattendance behaviours.

2.2 Empirical Review

Education is negatively impacted by both financial and psychological factors when teaching and learning tools are vandalized (Yildirim, 2017). According to Dedel (2019), well-kept buildings, furnishings, and other infrastructure foster a supportive learning environment that raises student achievement. School vandalism, according to Wang et al. (2022), is the deliberate and harmful destruction of educational infrastructure. They emphasized several types of vandalism that impair the standard of the learning environment, such as tearing pages from books, smashing windows, and writing on library volumes.

School vandalism has been identified as one of the issues in US schools with the greatest magnitude by the US Department of Education, Educational Agencies, Major Educational Associations, and National organizations (as cited in Ghimire & Rana, 2022). It is believed that vandalism presents a physical risk to students since damaged windows, shattered toilets, and other vandalized infrastructure raise the possibility of mishaps that result in bodily injury. Schools have had instances of arson, break-ins, and purposeful and unintentional property destruction.

In their investigation on the nature of school violence in a few public high schools in South Africa, Qwabe et al. (2022) discovered that vandalism is a way for students to show their violence. This study also demonstrated the financial costs associated with vandalism of educational materials; educational institutions may have to pay up to \$2 billion to repair the harm and rebuild the environment that promotes learning. Furthermore, parents have been asked to sign a contract agreeing to pay for the rebuilding of school buildings destroyed by arson and vandalism. Despite this, vandalism is still an issue in South Africa, not just in particular schools but also in the surrounding community.

The situation in Kenya is the same as it is on a continental and global scale. Previous research literature suggests that students who commit vandalism mainly shatter windows, injure furniture, and ruin books, labs, and sports equipment (Kinuthia, 2019). This can go so far as to destroy the school infrastructure and defile the school. This leads to the disruption of the teaching-learning process. When such vandalism occurs, it also poses health risks to students and educators. Ngesu (2022) in his studies entitled, "*Voices from the students: Dissatisfaction and violence in secondary schools in Kenya*," discovered that secondary schools in Kenya frequently experience arson attacks. The results of this study showed that vandalism incidents have a greater impact on boys' schools than on girls' schools.

Data indicates that 51% of the schools experiencing vandalism were boys' schools, followed by 28% girls' schools and 21% coeducational institutions. This wave of vandalism led to the closure of numerous schools, displacing approximately 6,000 students and disrupting their education.

III. METHODOLOGY

3.1 Study Area

The study was conducted in Matungu Sub-County due to its notable issues with student indiscipline and stagnant KCSE performance, which has remained at a mean of D+. Matungu Sub-County, located in Kakamega County, borders Navakholo to the south, Kakamega Central to the west, Bumula to the north, and Butere Sub-County to the east. It spans 301.9 km² and has a population of 146,563 according to the 2019 census.

3.2 Research Design

This study employed a descriptive survey design, which allowed for the collection of data from a wide range of participants, including students, teachers, and administrators from various schools. This broad approach provided a detailed overview of the situation. The descriptive survey design is particularly useful for evaluating current conditions, understanding ongoing processes, and identifying emerging trends. By incorporating these elements, the study achieved a more nuanced and comprehensive understanding, enhancing the ability to generalize the findings across the entire population (Snyder, 2019). This methodology facilitated an in-depth collection and analysis of data, capturing both individual experiences and broader trends related to student behaviour and academic performance.

3.3 Target Population

In research, the term "target population" denotes the specific group from which samples are drawn for measurement (Kombo & Tromp, 2018). It also represents the broader population to which the study's findings are intended to apply (Njeru, 2019). As shown in Table 3, the target population for this study included 16,356 students, 327 classroom teachers, 42 guidance and counseling teachers, and 42 deputy principals. These groups were chosen due to their direct access to data on student academic performance and disciplinary matters. According to Ersoy (2019), a well-defined study population should have distinct observable characteristics.

Table 3

Target Population

Category of School	Number of Schools	Number of Students	Number of Class teachers	Number of Guiding and Counselling Teachers	Number of Deputy Principals
Boys boarding	3	3408	68	3	3
Girls boarding	2	2494	50	2	2
Mixed day and boarding	11	3107	62	11	11
Mixed day	26	7347	147	26	26
Total	42	16356	327	42	42

Source: Matungu Sub-County Education Office (2024)

3.4 Sampling Procedure and Sample Size

A stratified random sampling technique was employed. With this method, the population is separated into discrete subgroups (called strata) according to shared traits. In this instance, the four strata of schools in Matungu Sub-County were mixed-day and boarding schools, boys' boarding schools, girls' boarding schools, and mixed-day schools. There were three boarding schools for boys, two residential schools for girls, eleven mixed-day and boarding schools, and twenty-six mixed-day schools in total. Eight mixed-day schools, four mixed-day and boarding schools, one boy's boarding school, and one girls' boarding school were all randomly chosen for the study. In addition, random selection was utilized to pick pupils from these schools, while purposive sampling was used to pick teachers.

The proper sample size was calculated using Slovin's formula (1970) according to Slovin (1970), to determine the number of respondents to include in the study (Bell et al., 2024). Thus, 391 respondents total 14 Deputy Principals, 28 Class Teachers, 14 Guidance and Counselling Teachers, and 335 Students—were involved in this study. The idea put forth by Kothari (2018) that the sample ought to accurately reflect all of the population's characteristics served as the basis for this choice.

Table 4*Sampling Frame*

Respondents	Sample size	Sampling technique
Deputy Principals	14	Purposive sampling
Guiding & Counselling teachers	14	Purposive sampling
Class teachers	28	Purposive sampling
Students	335	Simple random sampling
Total	391	

3.5 Data collection methods

The study employed questionnaires, and interviews to collect data as discussed below.

3.5.1 Questionnaires

The researcher gave teachers and pupils both open-ended and closed-ended questionnaires. The researcher was able to get information from a sizable number of respondents in a comparatively short amount of time because of the questionnaires (Tuğcu et al., 2023). According to Tuğcu et al. (2023) and Kothari (2018), questionnaires are research instruments that allow the investigator to gather data regarding the state of affairs and conduct surveys to find out about the attitudes and opinions of the target audience. The questionnaire asked for particular information as well as general information (Biodata) regarding the impact of student indiscipline on performance and academic accomplishment in Matungu public secondary schools.

3.5.2 Interview Schedule

In chosen schools within the Matungu sub-county, the researcher conducted interviews with fourteen deputy principals. The purpose of the interview process was to learn more about the academic performance and lack of discipline among the children in all of the Matungu Sub County's schools. The interview was designed with questions covering every one of the study's objectives. According to Mazhar et al. (2021), questionnaires do not yield as trustworthy, valid, or satisfying results as interviews do, particularly when high degrees of interaction are necessary to acquire the desired results for the study. Furthermore, they underlined that the interviewing procedure forces the study to evaluate the degree of collaboration as well as the facial validity and reliability of the provided information. Open-ended questions were incorporated into the interview schedules to encourage the respondents to provide thoughtful answers.

3.6 Data Analysis Methods

The study incorporated both qualitative and quantitative approaches of investigation. Data were assessed to determine the Influence of Vandalism on Academic Performance of Students in Public Secondary Schools in Matungu Sub-County, Kenya, the study employed regression analysis to establish the relations between study variables.

IV. FINDINGS & DISCUSSIONS**4.1 Response Rate**

The objective of the study on academic performance and student discipline in public secondary schools in Matungu Sub-County, Kenya, was to evaluate the response rates across different participant groups. Table 5 presents the response rates for each respondent category, illustrating their level of participation and engagement in the study.

Table 5*Response Rate*

Category	Target	Number responded	Response rate (%)
Deputy Principal	14	14	100
G\$C teachers	14	14	100
Class teacher	28	28	100
Students	335	335	100
Total	391	391	

Table 5 illustrates the response rates from various participant groups in a study focused on student indiscipline and academic performance in public secondary schools in Matungu Sub-County, Kenya. The data reveals that all categories—Deputy Principals, Guidance and Counselling Teachers, Class Teachers, and Students—achieved a 100%



response rate. This full participation is crucial for the study's accuracy and reliability regarding student behaviour and academic outcomes. Achieving a 100% response rate effectively reduces the potential for nonresponse bias, which could undermine the validity of the findings (Groves & Dipko, 2019). Complete involvement from all groups ensures a comprehensive view of the issues, leading to more dependable conclusions and recommendations for improving student conduct and academic performance (Sallee, 2023). High response rates, as highlighted by Dillman et al. (2024), are indicative of successful survey administration and participant engagement. The results in Table 4.1 confirm this, showcasing a significant level of commitment from all respondents. Additionally, Groves and Dipko (2019) stress that full responses are essential for making sure the study's findings accurately represent the entire sample, which is critical for devising informed decisions and effective strategies within the educational context.

4.2 Descriptive Statistic

4.2.1 Descriptive statistics for demographic characteristics of teachers

The study aimed to explore how demographic characteristics of teachers impacts students' academic performance. The results are detailed in Table 6.

Table 6

Descriptive Statistics

Variable label	Min	Max	Mean	Std. Deviation	N
Age of teachers	-.822	1.210	.000	1.000	391
Experience	-.033	.400	.036	.003	391
level of education	-1.390	2.570	1.87	.579	391
Gender of teachers	-.002	.004	.003	.001	391

Note: Min= Minimum: Max=Maximum

Table 6 reveals that the mean values offered average characteristics, with teachers' experience showing a slightly positive average score of 0.036. Standard deviation highlighted the variability, like the 0.579 deviation in education levels, indicating moderate diversity among teachers' qualifications. This result suggests that, on average, teachers in the study have a small but positive amount of experience, which is consistent with findings that experience can influence teaching effectiveness and student outcomes (Lombard et al., 2022).

4.2.2 Descriptive statistics for the vandalism of teaching and learning resources

The study aimed to explore how vandalism of teaching and learning resources impacts students' academic performance. The results are detailed in Table 7.

Table 7

Descriptive Statistics

Variable label	Min	Max	Mean	Std. Deviation	N
Destruction of learning materials	0.2	4.8	2.5	0.9	391
Destruction of classrooms	0.1	3.9	2.1	1.1	391
Destruction of laboratories	0.0	4.5	2.7	1.3	391

Note: Min= Minimum: Max=Maximum

Table 7 reveals that the mean score for destruction of learning materials suggests a moderate level of vandalism concerning learning materials. The destruction of textbooks and other materials impacts students' ability to study effectively, leading to poor academic performance. This implies that students without adequate learning materials are likely to struggle academically, as they lack the necessary resources to support their education (Torwali & Troy, 2023).

The mean score for destruction of Classrooms indicates a moderate to low level of classroom vandalism. Damaged classrooms can create an unsafe or uncomfortable learning environment, which can negatively affect students' concentration and motivation. This suggest the importance of a conducive learning environment in promoting student achievement (Usman,2021)

While destruction of Laboratories mean score reflects a slightly higher level of vandalism in laboratories compared to classrooms and learning materials. The destruction of lab equipment can severely limit students' opportunities to engage in practical science lessons, which are crucial for understanding complex concepts. According to Bandura's Social Learning Theory, students who observe vandalism may replicate this behaviour if they see it as a norm (Amsari, 2024).



4.2.3 Students’ Academic Performance in Public Secondary Schools in Matungu Sub County

The study sought to investigate Students’ academic performance in public secondary schools in Matungu Sub County. Table 8 presents the results.

Table 8
Descriptive Statistics

Variable label	Min	Max	Mean	Std. Deviation	N
KCSE Mean Points	2.50	11.00	6.45	2.30	391
Joining University (%)	15	95	48	18	391

Note: Min= Minimum: Max=Maximum

The results from Table 8 reveals that students’ KCSE mean points ranged from a low of 2.50 to a high of 11.00, with an average score of 6.45. This spread indicates variability in student performance, with a standard deviation of 2.30. Additionally, the percentage of students achieving a C+ or higher, thus qualifying for university, varied significantly across the sample. The percentage ranged from 15% to 95%, with an average of 48%, and a standard deviation of 18%. This finding supports the notion that educational outcomes can vary widely depending on institutional factors, as discussed by (Lombard et al., 2022) who emphasizes the importance of understanding these variations to address educational disparities effectively.

4.3 Regression Analysis

The primary objective was to ascertain how teaching and learning resource vandalism affected students' academic performance in public secondary schools. The results are shown in Table 9.

Table 9
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.076a	.006	.003	2.435	.006	2.029	1	345	.055	1.535

- a. Predictors: (Constant), Vandalism
- b. Dependent Variable: Academic Performance

Table 9 presents findings suggesting a positive link between academic success and vandalism, with a correlation coefficient (R) of 0.076. This implies that the degree of graffiti and pupils' academic success have very little in common. With an R Square value of 0.006, the degree of vandalism can only account for 0.6% of the variation in academic achievement. This incredibly low percentage suggests that academic achievement is not much impacted by vandalism. Furthermore, at the 0.05 level of significance, the F Change value is 2.029 with a significance level of 0.055, indicating statistical significance. The Durbin-Watson value of 1.535 is within the permitted range, indicating that there is no substantial autocorrelation in the regression model's residuals, yet this significance shows that the model does offer strong evidence that vandalism affects academic achievement.

Consequently, this study suggests that academic performance in public secondary schools in Matungu Sub-County is not significantly impacted by vandalism of teaching and learning tools, at least not statistically. Even while the correlation is small but noteworthy, it is still possible that additional variables or various types of vandalism could have an impact on academic results under different conditions or using alternative approaches. This is consistent with studies on the effects of vandalism in learning environments, which frequently point out unintended consequences for academic achievement.

4.4 Interview

This section presents the findings from the interviews, beginning with a summary of the response rates from the selected participants. The interview results reveal that vandalism of teaching and learning resources has a substantial effect on students’ academic performance in public secondary schools. For instance, respondent 1 said”

“According to my observations, pupils’ academic performance may be indirectly impacted by resource vandalism. Damage to materials frequently results in pauses in instruction and a shortage of necessary learning resources. For example, students lose out on hands-on experiments that are essential to their comprehension of the subject if science lab equipment is damaged. Their general performance and



eagerness to learn may be affected by this. It is crucial to address vandalism by including kids in conversations about its effects and taking preventative actions.”

4.5 Hypothesis Testing

The hypothesis testing was done by T-test and the results is presented in Table 10

Table 10

Two-Sample T-Test for Hypothesis Testing

	Test Value = 7					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Vandalism	0.8164	391	.4180	4.698	-4.81	14.58

From the output $t=0.8164$ with 391 degree of freedom and p value = value of Sig. Two tailed= 0.4180 and since $p=0.2090 > 0.05$, I fail to reject the null hypothesis that vandalism has no statistically significant influence on academic performance in public secondary schools.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The study draws the conclusion that there is little direct impact of vandalism on pupils' academic achievement based on the data. Although it presents difficulties, it has little effect on academic success.

5.2 Recommendations

According to the study, schools should increase security and foster respect for school property as preventive steps to lower vandalism. To comprehend how vandalism interacts with other factors influencing educational achievement, a comprehensive approach is necessary.

Longitudinal research should be done in the future to monitor the long-term impacts of different forms of indiscipline on students' academic performance and general educational achievements. This could aid in comprehending the long-term effects of indiscipline on academic achievement.

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