

Research Article

Assessment of Learner Satisfaction and Its Influence on Academic Achievement in Secondary School Education

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Learner satisfaction is a crucial element to quality learning and a determinant of learner's overall academic achievement. This study aimed to assess the level of learner satisfaction with teaching and learning, determine the level of importance learners place on teaching and learning, and determine influence of satisfaction on academic achievement in public secondary schools in Kisumu East Sub-County, Kenya. The study was a mix of a descriptive survey and correlational research design. Data was collected with the aid of a structured questionnaire. Proportional stratified sampling was used to identify 303 respondents. The respondents comprised of 128 males and 175 females. Eighty-seven of the respondents were aged 18 years and a total of 78 learners accounting to 25.71% of the total respondents had a mean grade of C+. Overall learner satisfaction was 4.11. Respondents reported highest satisfaction with aspects related to teacher – learner instruction and teacher competence with reported mean satisfaction of 4.27 and 4.12 respectively. Learners were least satisfied with aspects related to learning facilities with mean satisfaction value of 3.97. Learners reported least satisfaction with the equipment of library and laboratory facilities. Sixty-five percent of the learners considered teacher mastery of content and use of different instructional techniques very important while eighty-seven percent of the respondents agreed on the importance of examination being in line with content taught in class. The quadrant analysis showed that aspects related to teacher – learner relationship were considered to be of high importance to the learner and resulted in a high level of satisfaction. Regression analysis showed a significant positive correlation $r = 0.233$ ($p = 0.002$) between learner satisfaction and academic achievement. These findings underscore the importance of investing in teacher quality and maintaining a conducive learning environment to enhance learner satisfaction and, ultimately, academic achievement. Recommendations are made to the

ministry to invest in teacher training and development to enhance teacher competence, approachability, and interaction with learners, as these factors significantly influence learner satisfaction. In addition, there is need for adequate resource allocation towards the improvement of library and laboratory facilities to create a better learning environment for the students.

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Introduction

Background of the Study

Secondary education plays a pivotal role in creating opportunities and advancing social and economic development (Ondieki, 2022). It provides students with the competencies, knowledge, and skills needed for the job market, while also shaping their attitudes and values to ensure active and productive community participation (Ondieki, 2022). This commitment to quality education was reaffirmed during the World Forum for Education in Incheon, Korea, where nations pledged to urgently pursue an inclusive and equitable education agenda (Imana, 2017). The forum's goals included enhancing learning outcomes by strengthening education inputs and processes, with a focus on evaluating progress (Imana, 2017). Additionally, it emphasized the empowerment, motivation, and support of teachers within efficient and effective education systems. Despite these global commitments to ensure quality education, countries worldwide remain at different stages of achieving this objective.

In Kenya, the government implemented a subsidized secondary education system in 2008, where each student is granted Kshs 22,800 annually to cover teaching and learning expenses (Kagama & Irungu, 2018). The government also takes measures to train and employ university graduates who specialize in teaching two subjects exclusively to ensure educational quality (Kagama & Irungu, 2018). Despite these government initiatives aimed at delivering quality secondary education, there's a persisting issue of low student academic achievement. Numerous studies have shown that secondary schools continue to report poor academic performance with 88.5 percent of students failing to meet the minimum university entry grade of C+ (Oluoch & Gogo, 2022; Ondieki, 2022). In 2017, only 11.5 percent of candidates who took the Kenya Certificate of Secondary Examination (KCSE) achieved a grade of C+ or higher, which is the qualification for university admission. This marked a decrease from 15.6

percent in 2016 (Ondieki, 2022). The number of students scoring 'A-' and above declined from 14,754 in 2015 to 4,786 and 2,856 in 2016 and 2017, respectively. In contrast, the number of students who scored 'D+' and below significantly increased, constituting 65 percent of the total KCSE candidates in 2016 and 2017 (Ondieki, 2022).

Various theories have tried to explain influences on learning that affects the academic performance of a student. Walberg's theory of academic achievement posits that psychological characteristics of individual students and their immediate psychological environments influence educational outcomes (cognitive, behavioral, and attitudinal) (Reynolds & Walberg, 1992). The theory identifies various factors that affects the academic performance of a student (Walberg, 1982). Some of the factors identified include; classroom management, parental support, student-teacher interactions, social-behavioral attributes, instruction quality and quantity motivational-effective attributes, and exposure to media. In addition, cultural factors, peer pressure, learner attitudes, school administration, dating, and gender have all been reported to have an impact on academic achievement (Clark & Mathur, 2012; Nzoka & Orodho, 2014; S. Odanga, 2018). The present study tries to assess learner satisfaction with selected aspects related to the teaching and learning process; teacher competence, teacher – student interaction, learning facilities and assessment.

Learner satisfaction is a crucial aspect in contributing to academic achievement. Learner satisfaction results in improved academic achievement, reduced dropout rates, increased engagement and motivation, positive attitude towards school, and an improvement in the overall learning outcomes. Learner satisfaction is a key component of high-quality learning and a good determinant of a learner's overall academic achievement (Gopal et al., 2021; Jegathesan et al., 2018; Rajabalee & Santally, 2021; Rashidi & Moghadam, 2014; Virtanen et al., 2017). According to Wu et al. (2015), learning satisfaction takes into account how the teaching and learning sessions affect the learner. A satisfied learner is open to the teaching and learning process, is more likely to report higher academic accomplishment, and is less likely to give up on their studies (Gonzalez Rogado et al. 2014). In Kenya's education system, low academic performance and high dropout have been related to low learner satisfaction and internal inefficiency (James et al., 2016), among other problems. Despite its importance, there is little information available on learner satisfaction and how it affects academic achievement in Kenyan secondary education.

Statement of the Problem

Kisumu East Sub- County has had poor academic achievement for the past 7 years. The sub-county had a total mean of 2.631 in the 2022 KCSE examinations. Based on the 2022 KCSE grading system, a significant number of candidates in Kisumu East Sub - County failed to score the minimum university entry qualification grade of C+. Ondieki (2022) noted that the number of candidates who scored grade C+ and above rose to 173, 345 in 2022, compared to 145, 776 in 2021. These statistics imply that the national improvement is not reflected in Kisumu East Sub- County secondary schools. According to data from the Kenya Certificate of Secondary Education (KCSE) exams for 2017, 2018, and 2019, Kisumu East Sub-County recorded mean scores of 3.03, 3.21, and 3.33, respectively. These scores were notably lower when compared to the Kisumu County's overall mean scores, which stood at 4.02, 4.16, and 4.49 for the same years, as well as the performance of the other six Kisumu Sub- Counties.

The repercussions of this underperformance among students in Kisumu East Sub-County are significant. It includes students missing out on the career opportunities they aspire to, and decreased self-esteem and confidence among those continuing their education. Additionally, poor academic performance might discourage parents from covering school fees and providing necessary school supplies, as they may perceive it as futile. This situation could potentially exacerbate the issue of youth unemployment, which is a pressing concern in the nation.

Numerous studies have investigated the factors contributing to low academic performance in the sub-county. However, these studies have typically focused on variables such as the academic success of AIDS-orphaned children, the influence of parental engagement, and other cultural elements. As such, it becomes imperative to explore the intricate connections between learner satisfaction and academic achievement for secondary school students in the Sub -County. The study is essential because enhancing the academic achievements of students in Kisumu East Sub-County could lead to an improvement in both the mean scores of Kisumu County and the national level, potentially having a positive impact on the future prospects of young individuals. Given the importance of learner satisfaction and the lack of research on this topic in Kenya, it is clear that further research is needed in this area. This study therefore envisages addressing this gap regarding learner satisfaction in public secondary schools in Kenya.

Learner satisfaction and its influence on academic achievement

The importance of learner satisfaction has increased with the globalization of education (Salinda Weerasinghe et al., 2017). A high degree of learner satisfaction is crucial for attracting new learners and keeping existing ones. Additionally, it is crucial for ensuring that learners receive satisfactory academic grades and obtain necessary competencies to succeed in the workforce (Kirmizi, 2015). The world at large, stakeholders, the institution, and learners themselves are all impacted by how satisfied they are with the teaching and learning. According to Annamdevula and Bellamkonda (2016), learner motivation is positively impacted by learner satisfaction. Additionally, it contributes to the growth of a positive attitude toward the process of teaching and learning. It fosters collaboration, positive academic experiences, confidence, enhances academic performance and ensures high completion rates (Gee, 2018).

The institution is greatly impacted by learner satisfaction as well. It supports the institution's achievement of its primary training mandate and further instills the institution's vision and mission in the learner (Ali et al., 2016). It strengthens and expands the institution's competitive advantage. In addition, it encourages the creation of exchange programs, has an impact on grant funding from donors, and fosters the expansion of the alumni network. From literature, it is evident that learner satisfaction is very important and it's crucial that their inputs are considered. Currently, majority of research on the quality of educational services have heavily depended on expert academic input while omitting that of the learners themselves (Hasan & Masri, 2015).

A review of the literature reveals a complex link between learner satisfaction and academic success and. Learner satisfaction and academic achievement have been linked in several studies (Malik et al., 2013; Saha & Karpinski, 2016). According to a study conducted at Malaysian Open and Distance Learning (ODL) universities reported a correlation between learners' academic achievement and satisfaction with course materials, assessments, and response times (Jegathesan et al., 2018). Learners who received grades that met their expectations expressed greater satisfaction. According to Lodi et al. (2017), academic effectiveness and average grade points were substantially correlated with satisfaction.

General objective

To assess the level of learner satisfaction and determine its influence on academic achievement among learners in public secondary schools in Kisumu East Sub-County, Kenya.

Specific objectives

The study aimed to determine the following within the public secondary schools in Kisumu East Sub-County:

- To determine the level of learner satisfaction with teaching and learning within the public secondary schools in Kisumu East Sub-County.
- To determine the level of importance learners place on teaching and learning within the public secondary schools in Kisumu East Sub-County.
- To determine the influence of learner satisfaction on academic achievement within the public secondary schools in Kisumu East Sub-County.

Hypotheses

- H_1 : There is a positive correlation between learner satisfaction and academic achievement among students in public secondary schools in Kisumu East Sub-County, Kenya.
- H_2 : Learner satisfaction significantly influences academic achievement among students in public secondary schools in Kisumu East Sub-County, Kenya, with higher satisfaction levels corresponding to better academic performance.

Significance of the Study

The primary beneficiaries of the present study will be the secondary school students in Kisumu East Sub-County. By examining this relationship between learner satisfaction and academic achievement, the research has the potential to provide insights that can lead to strategies and interventions aimed at enhancing academic performance among students in the region. This is of paramount importance, due to the low academic achievement of students in the sub-county, compared to the national and Kisumu County performance. Similarly, by investigating the factors that influence learner satisfaction and their impact on academic outcomes, the research addresses local educational concerns. This local relevance is critical for developing effective policies and practices that resonate with the community. Addressing the established gap in the literature will contribute to a broader understanding of the educational landscape in Kenya. It also sets the stage for potential future research in this area.

Limitations of the study

The study was limited in several ways. Firstly, there is a likelihood of response bias. The students interviewed may have been inclined to give socially desirable responses due to the sensitivity of the research topic. Secondly, the findings from the study are culturally and contextually specific to Kisumu East Sub- County schools and students, making them not directly applicable to other regions in Kenya with varying cultural and educational setups. The generalizability of the findings of this study is limited to secondary schools only, leaving out primary schools and universities. Also, the study does not account for all confounding variables that impact academic achievement such as home environment and school resources.

Operational Definitions of Terms

Academic Achievement: Performance results that indicate accomplishment of the specific objectives outlined within the learning environment by the learners in relation pursuit of careers.

Learner Satisfaction: Student's perceptions of the quality, effectiveness, and overall experience of learning.

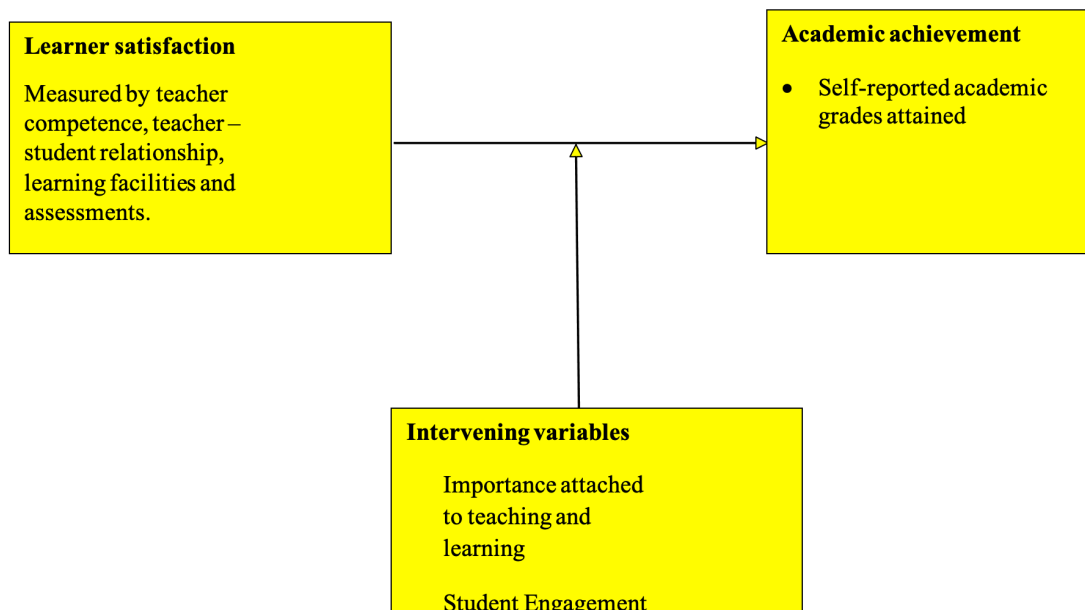
Teaching: The range of activities performed by teachers and other educators as part of the instructional process to facilitate the acquisition, understanding, and application of knowledge, skills, and competencies by learners.

Learning: The process of acquiring, understanding, and applying the knowledge, skills, and competencies taught in school.

Conceptual framework

It is conceptualized that the academic achievement of learners depends on their satisfaction with the teaching and learning within the school environment (Gopal et al., 2021; Jegathesan et al., 2018; Rashidi and Moghadam, 2014). As a result, both good and negative effects on a learner's academic success can be attributed to their level of learner satisfaction derived from the teaching and learning process. The teaching and learning process affects learner satisfaction (Clark & Mathur, 2012; Nzoka and Orodho, 2014; S. Odanga, 2018). In the study, learner satisfaction with aspects relating to teacher competence, teacher-students relationship, learning facilities and assessment made up the study's independent variables. The availability of sufficient instructional resources and qualified academic

instructors increases learner satisfaction. These are perceived to have an impact on learners' academic achievement, indicated by their self-reported grades.



Methodology

Research Design

The research adopted a descriptive survey and correlational research design. Structured questionnaires were used to collect data.

Study Area

The study was carried out in public secondary schools in Kisumu East Sub-County, Kenya. The Sub County has a total of 15 public secondary schools with a student population of 1433 (Kisumu County Education Office, 2022). The target population was obtained from fifteen (15) public secondary schools in Kisumu East Sub-County. The population was composed of learners distributed between the four-year levels of secondary education. Stratified random sampling was used to select learners to take part in the study.

Sampling and Participants

The study was carried out in the fifteen (15) public secondary schools in Kisumu East Sub-County. Kisumu East Sub-County has 15 public secondary and 1 private school. Due to the research objective to focus on public secondary schools, the private school was left out of the study. Thus, all public secondary schools in Kisumu East Sub-County were included in the study to ensure its sample size represented the general student population in the sub-county. Cochran's formula (Cochran 1977) was used to calculate the sample size.

Stratified random sampling was used to select three hundred and three (303) learners. The learners were distributed through the four levels of secondary education in Kenya.

School	Students population	Percentage of student population	Sample size
St Dominic Bukna	62	4.34	13
Obwolo	139	9.73	29
Kibos	144	10.08	31
Okok	95	6.65	20
St Peter's Kindu	47	3.29	10
Kasagam	193	13.51	41
St Alloys Mayenya	63	4.41	13
Nyamasaria	125	8.75	27
Dr. Aloo Gumbi	213	14.91	45
St Albert Angira	72	5.04	15
Nyalunya	91	6.37	19
Orongo	85	5.95	18
GP Chiga	32	2.24	7
Got Nyabondo	32	2.24	7
Renia Mixed	40	2.80	8
Totals	1433	100	303

Table 1. Sample distribution of study respondents

Data collection tools

A structured questionnaire as adopted by Fieger, P. (2012) with modification was used. Expert judgment of lecturers of the university was sought to ensure construct and content validity. Test-retest method was be used to ensure the reliability of the questionnaire. The questionnaire had twenty- six questions in a 5 – point Likert scale highlighting the level of satisfaction and level of

importance. The areas of questioning were on; teacher competence, teacher Student relationship, learning facilities, assessment and overall teaching and learning process.

Procedures

Data was gathered from the sampled learners using a structured questionnaire. The questionnaires were given to the students and asked to fill. The study questionnaire gathered the demographic data of the participants and looked at how satisfied they were with the teaching and learning and how important they were to them individually, as well as their self-reported academic score. The researchers took the time to walk the learners through the questionnaire and show them how to fill in the responses. The researchers computed the overall satisfaction score (average of the 25 questionnaire responses) which was then correlated with academic performance

Data Analysis

Statistical software (SPSS version 25) was used. Descriptive analysis of data was done using frequencies and percentages for demographic data of respondents. Assessment of level of satisfaction with respect to aspects related to teacher competence, teacher student relationship, learning facilities and assessment will be given in percentages and presented in tables. The mean satisfaction per questionnaire item was calculated and presented in a line graph. Assessment of perceived importance learners place on the various aspects related to the aspects detailed above was calculated in percentages and displayed in a graph.

Finally, the relationship between academic achievement and learner overall satisfaction was evaluated using linear regression. The self – reported academic grade a learner received on their end-of-term exam served as a measure of their academic achievement.

Research approval

Approval to conduct the study was sought from the National Commission for Science, Technology & Innovation (NACOSTI), and License No. NACOSTI/P/23/22973.

The Role of the Researchers

The researchers had a brief meeting with learners prior to the administration of the questionnaires. They gave an overview of the research questions and asked for any clarifications the learners sought in

filling out the questionnaire. To avoid victimization for poor scores, learner identifiers were not captured and the questionnaire were strictly collected and stored by the researchers.

Results

Demographic Information

A total of 303 questionnaires were administered to students in public secondary schools in Kisumu East Sub- County. Fifteen (15) questionnaires were expunged from the study due to faulty entries. The remaining 175 questionnaires were analyzed. Demographic data of respondents is detailed in Table 2 below.

Biodata		Frequency	Percentage (%)
Gender			
Male		128	42.29
Female		175	57.71
Age (years)			
14		2	0.57
15		17	5.71
16		45	14.86
17		74	24.57
18		87	28.72
19		48	16.00
20		23	7.43
21		2	0.57
22		3	0.99
23		2	0.57
Academic grade			
Grade	Points		
B+	10	5	1.71
B	9	17	5.71
B-	8	16	5.14
C+	7	78	25.71
C	6	45	14.86
C-	5	48	16.00
D+	4	52	17.14
D	3	14	4.57
D-	2	23	7.43

Biodata		Frequency	Percentage (%)
E	1	5	1.71

Table 2. Demographic information of respondents (n = 303)

Key: In Kenya education system, exam grading is as follows; A, A-, B+, B, B-, C+, C, C-, D+, D, D-, E corresponding to points 12,11,10,9,8,7,6,5,4,3,2 and 1 respectively.

Male respondents made up 128 (42.29%) of the total, while female respondents made up 175 (57.71%). The majority of responders 87 (28.72%) were 18 years of age. Seventy- eight respondents (25.71%) had a mean grade of C+.

Assessment of learner satisfaction

The learners were required to respond to twenty-six questions highlighting the level of satisfaction they attributed to the various questions related to the following aspects: Teacher competence, teacher – student relationship, learning facilities and assessment. A Likert scale 1- 5 with 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5= Strongly Agree was used.

Teacher competence

Table 3 below show respondents responses on level of satisfaction as a percentage on the 5 questionnaire items related to teacher competence.

Q. No.	Question	Level of satisfaction				
		Strongly Agree (%)	Agree (%)	Neither Agree or Disagree (%)	Disagree (%)	Strongly Disagree (%)
1	The course outlines were provided for the subject/units	36	36	11	5	11
2	The subject objectives were clearly stated	45	34	8	10	2
3	The stated objectives were met	35	39	17	6	3
4	The teacher had a thorough knowledge of subject content	59	24	11	4	2
5	The teacher used different methods to make learning enjoyable	62	24	8	2	5

Table 3. Responses obtained on teacher competence

Teacher- learner relationship

Table 4 below show respondents responses on level of satisfaction as a percentage on the 7 questionnaire items related to teacher – learner relationship.

Q. No	Question	Level of satisfaction				
		Strongly Agree (%)	Agree (%)	Neither Agree or Disagree (%)	Disagree (%)	Strongly Disagree (%)
6	The teacher treated learners with respect	53	26	8	5	8
7	The teacher provided opportunities to ask questions	66	25	4	3	2
8	Teacher provided answers to questions and issues raised by the learners	58	29	8	2	3
9	The teacher encouraged interaction to help learners learn better	63	31	3	3	1
10	The teacher observed punctuality	49	26	16	5	5
11	The teacher was approachable	43	31	20	3	4
12	The teacher provided help when I needed it	52	32	6	4	5

Table 4. Responses obtained on teacher- learner relationship

Learning facilities

Table 5 below show respondents responses on level of satisfaction as a percentage on the 5 questionnaire items related to learning facilities.

Q. No	Question	Level of satisfaction				
		Strongly Agree (%)	Agree (%)	Neither Agree or Disagree (%)	Disagree (%)	Strongly Disagree (%)
13	The classroom at the school provides a good environment for learning	50	33	8	7	3
14	The school library is well equipped with adequate reference materials to aid in learning	35	27	11	9	17
15	The laboratory is well equipped	43	28	10	9	9
16	The school environment is appropriate for learning	51	32	9	3	4
17	General infrastructure of the school is good and adequate for learning	46	29	13	8	5

Table 5. Responses obtained on learning facilities

Assessment

Table 6 below show respondents responses on level of satisfaction as a percentage on the 5 questionnaire items related to assessment.

Q. No	Question	Level of satisfaction				
		Strongly Agree (%)	Agree (%)	Neither Agree or Disagree (%)	Disagree (%)	Strongly Disagree (%)
18	I knew I was going to be examined	40	46	8	3	2
19	The method of examination was fair	39	36	16	5	4
20	The examination content was in line with content taught in class	51	28	11	5	5
21	The examinations were done at appropriate intervals	48	37	7	6	3
22	The examinations results were provided on time	48	28	7	6	10

Table 6. Responses obtained on assessment

General teaching and learning process

Table 7 below show respondents responses on level of satisfaction as a percentage on the 4 questionnaire items related to general satisfaction with teaching and learning process.

Q. No	Question	Level of satisfaction				
		Strongly Agree (%)	Agree (%)	Neither Agree or Disagree (%)	Disagree (%)	Strongly Disagree (%)
23	Through teaching, I am able to solve problems I encounter	56	30	7	4	4
24	Through teaching, I am more confident about my ability to learn	63	27	5	2	3
25	Through teaching, I am more positive about achieving my goals	65	23	7	3	2
26	Overall, I was satisfied with the quality of teaching and learning	46	34	9	5	6

Table 7. Responses obtained on overall teaching and learning process

Statistical analysis on learner satisfaction

The table below shows an analysis of mean satisfaction score, standard deviation and coefficient correlation on the various aspects of learner satisfaction.

Table no	Mean	Standard deviation	Coefficient of variation
Table 3	4.12	1.2	.29
Table 4	4.27	1.03	.24
Table 5	3.97	1.24	.31
Table 6	4.11	1.09	.26
Table 7	4.33	1.00	.23

Table 8. Statistical analysis of data obtained for feedback on learner satisfaction

Table 8 shows that most of the responses are close to the average. The coefficient of variation tells us about the variability of the data. The lower the value of the coefficient of variation, the more precise is the estimate. The overall feedback obtained on teacher competency, teacher student relationship, learning facilities and assessment was good with majority of learners satisfied.

Graphical representation of average learner satisfaction per questionnaire item

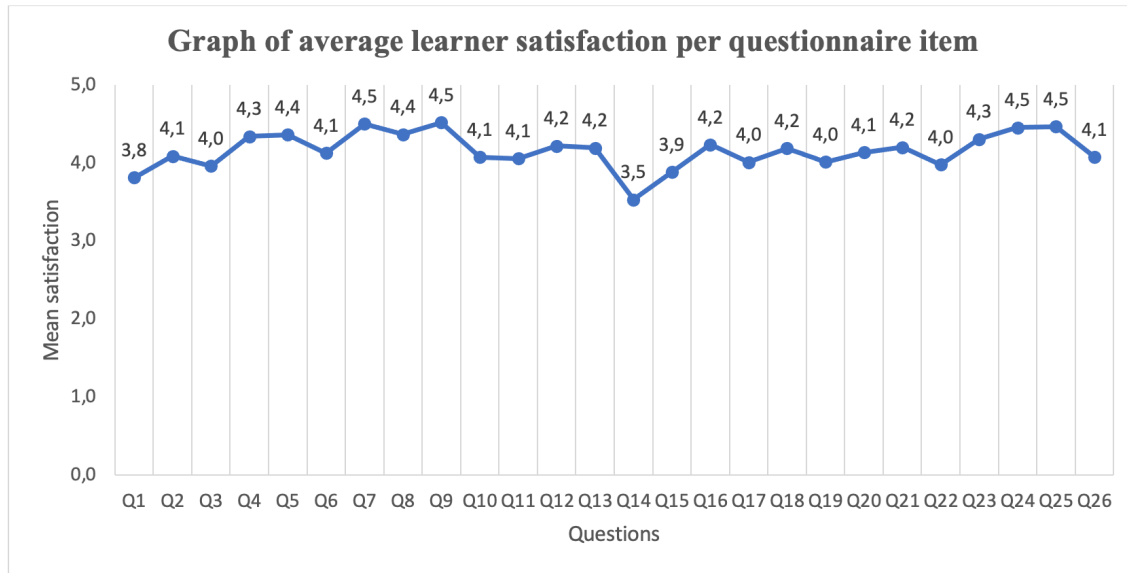


Fig. 1. Graphical representation of average learner satisfaction per questionnaire item

Key: Q1 responds to question 1 in the questionnaire tool.

From the Fig. 1 above, learners satisfaction reported highest satisfaction (4.5) with aspect related to teacher competence; teacher encouraged interaction and teacher provision for opportunities to ask questions (Questions 7 and 9) respectively.

Satisfaction with the equipment of library (Question 14) had the lowest mean of 3.5. Overall learner satisfaction (Question 26) was 4.1 showing learners were generally satisfied with teaching and learning.

Overall learner satisfaction

Respodents mean satisfaction levels were calculated by determining the mean of 22 questionnaire items (i.e. Q1 to Q22). The graphical representation is as shown below.

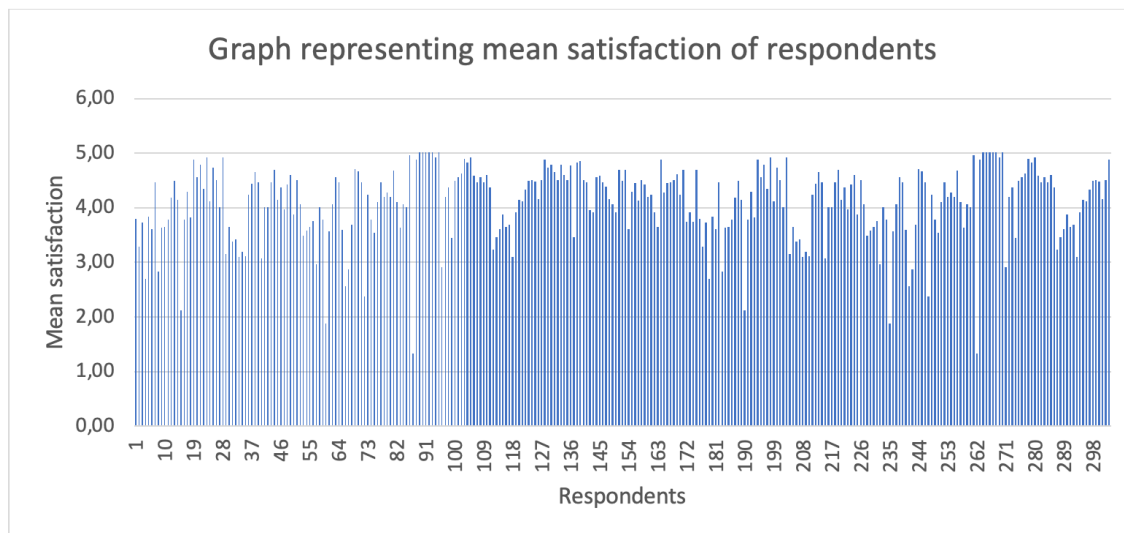


Fig. 2. Level of importance learners place on selected aspects of teaching and learning process

Learners were required to respond to the level of importance they individually placed on the 22 questions in a Likert-scale 1-5 with 1= Very unimportant, 2 = Unimportant, 3 = Neutral (neither important or unimportant), 4 = important and 5 = Very important. Their responses are displayed the graph below.

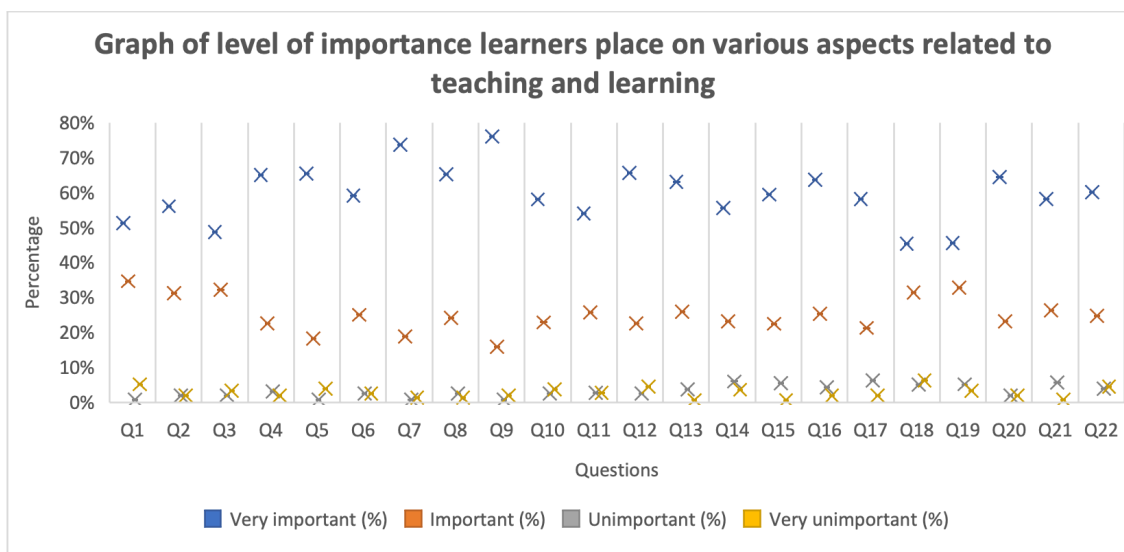


Fig. 3. Graphical representation of perceived learner importance on various aspects related to teaching and learning.

From the graph above, 65% considered teacher thorough knowledge of subject content and adoption of different methods of learning by the teacher made learning enjoyable as very important (Q4 & Q5). Five percent of the learner reported that course outline provision was least important (Q1). Seventy-four percent of the learners considered opportunity to ask questions as very important (Q7). Seventy-six percent of the learners reported that teacher encouraged interaction was very important (Q9).

With regards to learning facilities, 89% of the learners indicated that the classroom and school environment was important for proper learning (Q13 & Q16). Eighty-one percent of the respondents agreed on the importance of a well-equipped laboratory in promoting learning (Q15).

Eighty-five percent of the learner considered timely issuance of examination results (Q22) as important while eighty-seven percent of the respondents agreed on the importance of examination being in line with content taught in class (Q20).

Quadrant Analysis

A quadrant analysis linking learner perceived level of satisfaction and its perceived importance was done (Douglas et al., 2006). For each question, the percentages of learners who were satisfied or very satisfied as well as those who thought that particular aspect was important or very important were calculated and recorded. Thereafter, the median score for importance and satisfaction was calculated. For each percentage score, the distance from the median was determined. The satisfaction scores and importance score were plotted on the X and Y axis respectively. The responses were categorized into four categories as shown in Table 9 below.

<p>High Importance and Low satisfaction (A)</p> <p>The course outlines provided for the subject/units</p> <p>The subject objectives clearly stated</p> <p>The examination content in line with content taught in class</p> <p>Timely submission of examinations results</p>	<p>High Importance and High satisfaction (B)</p> <p>Teacher thorough knowledge of subject content</p> <p>Teacher providing opportunities to ask questions</p> <p>Teacher providing answers to questions and issues raised</p> <p>Teacher encouragement of interaction to help in learning</p> <p>Teacher providing help when needed</p> <p>Classroom a good environment for learning</p> <p>School environment appropriate for learning</p>
<p>Low Importance and Low satisfaction (C)</p> <p>Stated objectives are met</p> <p>Teacher punctuality</p> <p>Teacher being approachable</p> <p>School library equipment with adequate reference materials</p> <p>Laboratory adequate equipment</p> <p>General infrastructure of the school</p> <p>Method of assessment</p>	<p>Low Importance and High satisfaction (D)</p> <p>Teacher use of different teaching methods</p> <p>Teacher treatment of learners with respect</p> <p>Knowledge of time of assessment</p> <p>Interval of conduct of examinations</p>

Table 9. Importance – satisfaction grid for all learners

Regression Analysis

The findings of the regression analysis between learner satisfaction (independent variable) and academic grade (dependent variable) are displayed in Table 10 below. Learner satisfaction was calculated by determining the average response score for the 22 questionnaire items.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.589	.960	2.698	.008	.695	4.483
	Satisfaction	.727	.230	3.157	.002	.273	1.182

Table 10. Regression Coefficients

^a *Dependent Variable: Score*

A linear regression equation, $Y = 2.589 + 0.727 X$, was created. A positive association with a p-value of 0.002 and $r = 0.233$ was revealed by correlation analysis.

R square value = .054, Spearman's rho correlation coefficient = .205 with p value = .007

Discussion

Data collected from the survey indicated that learners were fairly satisfied with the teaching and learning process within the public secondary schools in the study area. The mean satisfaction was 4.1. This indicates a high level of learner satisfaction. These could be attributed to the fact that respondents reported high level of satisfaction with aspects related to teacher competence and teacher students relationship with reported means of 4.12 and 4.27 respectively. Earlier studies have reported that aspects related to teacher competence have been reported to be key determinants of learner satisfaction (Iqbal et al., 2019; Suswanto et al., 2017). Teacher providing learners opportunity to ask questions (Q7) and teacher interaction during teaching (Q9) had the highest mean of 4.50 and 4.52 respectively. In addition, learners reported high satisfaction with instructional quality and teacher mastery of content. This observation collaborates other studies reporting the key importance of instruction techniques and instructor mastery of content on learner satisfaction (Jan, 2017). Further to this, respect to learners, teacher approachability, learner opportunities to ask questions and teacher learner interaction have been reported to be key determinants of learner satisfaction (Bell, 2022;

Green et al., 2015; McLeay et al., 2017). This is collaborated in the present study where the means for teachers respect to learners, teacher punctuality and approachability, had means of 4.128, 4.076 and 4.061 respectively.

On the other hand, learner satisfaction with aspects related to learning facilities had the lowest mean of 3.97. Learner satisfaction with the level of school library and laboratory equipment was the lowest at a mean value of 3.535 and 3.884 respectively. This could be attributed inadequate library and laboratory resources and equipment. This observation is consistent with other studies that have reported low availability of reference materials in library in schools and inadequate equipment of laboratory facilities in secondary schools in Kenya (Kieti, 2018; Musyoka, 2018). A previous study reported that 55.7% of schools had no libraries and 55.6% of learners reported that the science laboratories were poorly equipped (Nyagah & Irungu, 2013). Science laboratory equipment has been reported to have a weak but significant relationship with students achievement (Ojuok et al., 2020). Studies have shown that learner satisfaction can improved by having well equipped libraries (Njaya & Murangwa, 2017).

The mean satisfaction value of assessment was 4.33 ± 1 . Time, method, content and timely feedback on examination results are important determinants of learner satisfaction (Salinda Weerasinghe et al., 2017). Majority of the respondents (mean = 4.137) reported the examinations content was in line with content taught in class. This is a very good indicator of presence of good exam setting and moderating guidelines. Studies have reported high stress associated with unfair examinations administered to learners where content does not test classroom instruction (Loh & Liew, 2016; Zhao et al., 2015). Examinations are key at ensuring the right knowledge is tested and appropriate learners are selected to various areas based on their abilities. This ensures proper selection and placement of learners, aids in informing policy decisions and provides an opportunity for learners to realize their full potential.

From results of quadrant analysis, the learners reported a high satisfaction with accompanying high importance on aspects touching on teacher competence, classroom and school environment. These areas are key aspects that influence learner satisfaction (Han et al., 2019; Teven & Herring, 2005). Teacher expertise together with manner of delivery of content is key in ensuring learners understand expected content which in turn improves learner satisfaction which further enhances academic achievement. A good learning environment improves learner comfort, reduces anxiety and distractions which will have a negative impact on the level of concentration. Equipment of the library was considered of low satisfaction and of low importance. Low satisfaction rating of the library shows

a general lack of reading culture among the learners of text and materials outside classroom given text. In addition, this could be explained by meager reading materials as has been reported (Wanjiku, 2013). School libraries play a role in promoting reading culture among secondary schools (Adejimoh et al., 2021). Lack of libraries and poor equipment of the libraries shows that the learners are not aware of the usefulness of the library as a resource center (Likoko et al., 2013; Onyara, 2013).

Regression analysis displayed a weak but significant linear relationship between learner satisfaction and academic achievement. Academic achievement was taken as the mean grade of the end term examination for the respective learners who took part in the study. Despite the examination being different from the different schools, it was considered standard since it was derived from the same syllabus that was being used across all the schools within the country. Findings of this study is collaborated with studies previously done that report a correlation between academic achievement and learner satisfaction (Lodi et al., 2017; Saha & Karpinski, 2016). More studies should be conducted across the various level of education to determine the extent to which learner satisfaction influence academic achievement. Ensuring learners are satisfied with teaching and learning process has a positive contribution towards academic achievement.

Conclusions and Recommendations

The study aimed at investigating learner satisfaction and its influence on academic achievement in public secondary schools in Kisumu East Sub-County, Kenya. Specifically, the study aimed to determine the level of learner satisfaction with teaching and learning, the level of importance learners place on teaching and learning and the relationship between learner satisfaction and academic achievement within the public secondary schools in Kisumu East Sub-County.

Several key findings were established from the analysis of the data. First, teacher competence, including the opportunity for learners to ask questions and teacher interaction during teaching, significantly influenced learner satisfaction. The high mean scores in these areas indicated a strong positive correlation between teacher competence and learner satisfaction. The teachers' encouragement of learner interaction, and teacher giving learners the chance to ask questions, received the highest ratings from learners. The overall learner satisfaction score of 4.11 ± 1.09 indicates that learners were generally happy with the teaching and learning process. Learner satisfaction and academic success had a substantial positive link ($r = 0.233$; $p = 0.002$). These findings align with previous research, emphasizing the importance of teacher attributes in learner satisfaction.

Secondly, aspects related to teacher-learner interaction, including teacher approachability, and punctuality received high satisfaction ratings among the respondents. This reflects the significant impact of teacher-learner dynamics on learner satisfaction, which is consistent with prior studies. Furthermore, the study revealed that the availability of a conducive school environment positively affected learner satisfaction. Learners reported a high level of satisfaction with the school's environment. However, there were concerns about the availability and quality of school library and laboratory equipment. Learners' satisfaction with the library's equipment was the lowest. This aligns with previous research highlighting the need for well-equipped libraries and science laboratories to enhance learner satisfaction and academic achievement. The content of examinations also played a crucial role in learner satisfaction, with most learners indicating that the examination content matched classroom instruction. This factor is vital in reducing learner stress and ensuring that examinations are a fair assessment of classroom learning. The quadrant analysis showed that aspects related to teacher – learner relationship were considered to be of high importance to the learner and resulted in a high level of satisfaction. These findings underscore the importance of investing in teacher quality and maintaining a conducive learning environment to enhance learner satisfaction and, ultimately, academic achievement.

Recommendations

Based on the study's findings, the following recommendations are made:

To invest in teacher training and development; schools should invest in continuous teacher training and development programs to enhance teacher competence, approachability, and interaction with learners, as these factors significantly influence learner satisfaction.

To improve school Facilities; schools should prioritize the improvement of library and laboratory facilities to create a better learning environment for the students. Well-equipped libraries and laboratories are essential for promoting reading culture and enhancing practical learning experiences.

To ensure examination content alignment; educational authorities and schools should ensure that examination content aligns with classroom instruction. This alignment reduces learner stress and ensures fair assessment. This study showed a weak but significant linear relationship between learner satisfaction and academic achievement. Further research should be conducted across various levels of education to explore the extent to which learner satisfaction influences academic achievement.

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