Relationship Between Income Generating Activities and School Operations in Public Secondary Schools in Nakuru County, Kenya

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Abstract

Free Day Secondary School Education policy was introduced in Kenya to ensure accessibility of education to all. Public secondary schools have consistently not been able to mobilize enough funds for their operations over the years. The inability to mobilize adequate funds not only affects school budgets but also core functions such as teaching and learning. Income diversification is among the strategies that schools can adopt to mitigate against financial constraints. This paper investigated the relationship between income generating activities and operations of public secondary schools in Nakuru County. The study was grounded on the Resource-Based Theory and adopted the correlational research design. The target population was 365 public secondary school principals and the same number of school bursars in Nakuru County. Random sampling was done using a formula developed by Nassiuma (2000). to get a sample size of 51 school principals and 51 school bursars. A bursars' questionnaire and principal's interview schedule were used to collect data. The face and content validity of the bursars' questionnaire and principals' interview guide were checked through expert judgment. The reliability of the bursars' questionnaire was estimated using the Cronbach Alpha method. The instrument was reliable as its coefficient was 0.762. Quantitative data was analyzed with the aid of the Statistical Package for Social Science. Qualitative data was analyzed thematically through the inductive method. Hypothesis was tested at the .05 level of significance using Pearson's Correlations. The findings indicated that the income generating activities schools engaged in were farming (49.3%), charging registration (49.3%) and tuition (38.7%) fees. Schools' operations index was at 2.88 out of 5 points rating scale. The results also indicated that there was a positive and statistically significant relationship between engagement in income generating activities and school operations, r(29) = .500, p =. 004.The study concluded that engagement in income generating activities influences schools' operations. These findings may assist school managers come up with measures that help schools reduce disruptions to their calendar due to financial challenges.

Keywords: School Operations, Income Diversification Strategies, Income Generating Activities

Introduction

Effective school operations require sufficient funding in order for the school to run appropriately. Ayodele (2021) argues that no organization could carry out its functions effectively without adequate financial resources at its disposal. Money is needed to pay staff, maintain the infrastructure and keep the services going hence the need for secondary school administrators to be adept at financial management practices to utilize the funds appropriately. Cherotich et al. (2020) observe that the principals who are in charge of school management are expected to play an important role in ensuring the smooth functioning of schools and proper and efficient use of available financial resources. The school management has to undertake tasks that are aimed at ensuring that education is equitable, efficient and accessible to all students (Cherotich et al., 2020). They are also charged with the responsibility of ensuring proper utilization of the school finances.

Obiakor (2023) noted that one of the biggest challenges of secondary school operation management was poor funding. As a result, the secondary school principal has to adopt innovative income diversification strategies to spread around the little resources available. The extent to which adequate educational programmes are achieved depends largely on the economic provisions supporting the programme. Lack of finance is a global problem bedeviling education institutions the world over (Obiakor, 2023). In the United States, inadequacy of funding for schools is so great that it leads to court cases where the underlying plaintiff arguments are that inequity in funding or insufficiency of funding that entail constitutionally unacceptable differences in educational opportunities. These differences in opportunities are posited to relate to differences in student achievement and other outcomes and require court intervention (Hanushek, & Joyce-Wirtz, 2023). In the United Kingdom, Miller and Smith, (2022) noted that schools were facing an unprecedented funding crisis, threatening staff redundancies, larger class sizes, restrictions to the curriculum and the elimination of support services. In Canada, amid teachers' strikes it was reported that a key issue at stake was that education has been chronically underfunded at the tax base (The Conversation, 2020). These reports, however, do not go into detail as to how school principals employ income diversification strategies to keep school operations going.

In developing countries, underfunding of secondary education has been widespread. Amaechina, et al. (2020) reported that in Nigeria, inadequate funding has been the bane of educational growth and development at all levels of education. These have become evident in the schools as a result of the challenges faced by most schools which include dilapidated structures, inadequate facilities and equipment for teaching and learning as well as the welfare of staff in terms of remuneration and working environment. Muhangi (2019) added that adequate resources have not been mobilized to allow secondary schools in Uganda to fully realize governments' existing plans for secondary education. The limited available resources are competing with other demands in the public sector, making it difficult for the government to mobilize additional resources to make secondary education efficient. It has not been made clear, however, the income diversification strategies that secondary school principals in these countries have adopted to keep school operations going despite limited funding.

In Kenya, the government directs funds to schools through Free Day Secondary Funds, National Government-Constituency Development Funds (NG-CDF) and the County Development Funds in devolved units. Parents also meet direct costs including boarding fees, activity fees, uniforms, transportation and lunch fees (Bosire et al., 2019; Onesmus, 2020). Other sources of funds are private sector, religious organizations, communities, Non-Governmental Organizations (NGOs), and development partners largely

the donor community (Rotich et al., 2021). Many studies have decried the inadequacy of these sources of funds (Nyangaresi et al., 2020). Moreover, Cherotich et al. (2020) noted that in Kenya, an analysis of the Kenyan government funding reveals that the education sector specifically in the secondary school's category still has large financial gaps which have not been met through government funding. Chemweno et al. (2019) noted that despite the introduction of FDSE, students are still going back home for non-payment of other levies. Coupled with the inadequacy of resources, the schools also grapple with delayed disbursement of funds (Njeri et al., 2023). The delaying of finances has inhibited various operations in secondary schools. The delay has necessitated school principals to be proactive and design financial resource mobilization strategies that would assist them cover the deficit needed to ensure that school operations continue (Cherotich et al., 2020).

In Nakuru County, public secondary schools are particularly affected by inadequate funding. This is due to increased enrolment after the implementation of 100% transition policy from primary school to secondary school which has led to increased enrollment in these schools (Otieno et al., 2020). Kiarie et al. (2019) observed that in order to ensure that schools operate, the parents and the school board have to come up with ways to ensure that they have resources that are needed to ensure effective and efficient operation of the schools. In addition, the schools have to cover salaries for the non-teaching staff such as cooks and watchmen and salaries for teachers employed by the board. Mwangi (2019) also found out that due to the large number of students enrolled in secondary schools, there was a big strain on the available teaching/learning resources, and this has led to the danger of provision of poor-quality learning. The study, however, did not investigate beyond teaching and learning aspects of school operations. It was therefore necessary to undertake this study in Nakuru County to fill the gaps in the relationship between income generating activities and school operations in public secondary schools in Nakuru County, Kenya.

Statement of the Problem

Education financing is a significant hurdle in emerging economies including Kenya. The policy of provision of free Day Secondary Education therefore implies that the government would sufficiently cater for the costs of education. The principals argue that the capitation is not sufficient for them to run the schools. This is due to increasing prices of commodities and inflation. Recent studies on financing of education in Kenya highlight the presence of serious finance related constraints affecting secondary school education. Principals also complain of delayed disbursement of funds, which in turn affects the operation of the schools to the point where schools must look for funds outside the government sources to cover the deficient funding. However, not much is known about the relationship between these funding strategies, in this case, Income Generating Activities and school operation given the scarcity of research on the topic. This study sought to investigate is the relationship between the Income Generating Activities being adopted by school managers who are the principals and school operations in public secondary schools in Nakuru County, Kenya.

Objective of the Study

The objective of the study was:

i. To establish the relationship between income generating activities and school operation in public secondary schools in Nakuru County, Kenya.

Research Hypothesis

The study was guided by the following hypothesis:

H_{01}: There is no statistically significant relationship between income generating activities and school operations.

Significance of Study

The study's findings may be beneficial to policymakers at the Ministry of Education in financial management and planning so that secondary schools can be self-sustaining. School management may also adopt the study findings to avoid disruptions of the school calendar due to financial challenges. The findings may also be used by the Ministry of Education to make policies that ensure resource allocation to ensure that education remains uninterrupted. The findings lay the groundwork for more research in other counties in Kenya and the world at large. Other potential beneficiaries from this study include school communities where they are informed on how they can acquire resources to help their secondary schools surmount the financial deficits.

Literature Review

Oranga et al. (2020) observe that Kenya's education is financed from various sources, depending on the types of the educational institutions. The government-maintained institutions are financed by the government out of funds voted by Parliament each year. The government funds tuition while parents and other stakeholders cater for school infrastructural development, students' welfare and salaries for some of the support staff.

The government subsidizes education in the form of Free Day Secondary Education (FDSE). In 2021 the capitation for FSE was capped at KShs 22,240 in response to heightened agitation for more funds to promote quality of education (Ministry of Education, 2021). The government of Kenya has also rolled out the supply of books to all public secondary schools hence utilizing part of what was meant for tuition vote head. Apart from the government capitation sent directly to schools, the government through the initiative of parliament introduced the National Government-Constituency Development Fund (NG-CDF) as a kitty to support constituency grass root development including education. It provides financing for the building of more schools, constructing and improving existing classrooms and facilities and providing bursaries to learners. (Rukwaro et al., 2017). The other source of funding for secondary schools is school fees. Parents pay fees to cater for other recognized levies such as boarding, lunch and uniform. Parents also finance Parents Association (PA) projects. Other sources of finance are through grants from the national and county governments.

While Oranga et al. (2020) provides a comprehensive overview of the sources of funding for secondary education in Kenya, it would benefit from more specific details on the distribution and impact of these

funds. Additionally, a clearer distinction between government funding for tuition and other operational costs would enhance the understanding of how these financial resources are allocated and managed within schools. Moreover, including information on the challenges or limitations associated with these funding sources would provide a more balanced perspective on their effectiveness in supporting secondary education in Kenya

The funding model used for basic education is the subsidized secondary education model known in Kenya as Free Day Secondary Education (FDSE). This model was adopted based on the enactments of the universally agreed Millennium Development Goals and lately the Sustainable Development Goals (SDGs). In addition, the Kenyan government through the Basic Education Act (2023) assures Kenyan children free basic education (Republic of Kenya, 2022, 2023). The launch of Free Day Secondary Education (FDSE) in 2008 was a strategy to make education accessible and affordable to many households in the country (Adan & Orodho, 2021).

AJa-Okorie, (2021) observes that despite the importance of quality education, financing of education has been at crossroads as the financial requirements of education have affected universal access to basic education. Many households are not able to meet the direct and indirect costs of schooling due to poverty, resulting in many school age children having limited or no access to schooling. Adan et al. (2021) noted that while the government has waived tuition fees and provides textbooks, other classroom materials such as exercise books and other stationery are still the parent's responsibility. This is because the government is facing budgetary constraints as it tries to strike a balance between funding the all-important education sector without compromising on other sectors which also need investment. Mashala, (2019) adds that abolition of secondary school fees does not mean free education as parents still pay significant amounts of money for their children's education, such as school uniforms, school bags, shoes, food and medical care. As a result, dropout, absenteeism and lower grade progression are still eminent at all levels.

Government funding of public secondary schools has been the subject of many studies in Kenya. Nyanga and Orodho (2021) established that despite the introduction of free day secondary education (FDSE), the latent cost of secondary education was still high and beyond the reach of the poor households. The study recommended that the Government of Kenya through the Ministry of Education should increase the amount of capitation and encourage schools to intensify income generating and cost saving measures geared towards making education affordable by all.

Adan and Orodho (2021) investigated the Socio-Economic and Cultural Implications on Equitable and Quality Education in Mandera West District, Mandera County; Kenya and concluded that the subsidized secondary education policy was not efficient and effective in providing equitable and quality education. The study recommended that there should be increased campaigns to empower the economic status of communities, increase funding to schools for the purchase of the critical instructional resources geared towards creating more child friendly schools and enhanced students' academic performance. The findings of these studies clearly point out that government funding through FDSE has not been adequate to the extent that poor households are still required to input money for other educational requirements.

According to Lwakasana and Getange (2023) income generating activities in educational institutions have gained prevalence worldwide. Muhangi (2019) adds that adequate resources have not been mobilized to allow secondary schools to fully realize governments' existing plans for secondary education. The limited

available resources are competed for with other demands in the public sector, making it difficult for the government to mobilize additional resources to make secondary education efficient. Hence, schools must come up with additional streams of income to cover the costs of education. In China, Cheng et al. (2023), state that school running businesses is an old phenomenon whose main function was to generate income to cover the running expenses of schools. School buildings are also being rented to generate income. Lewin and Calloids (2021), states that in Latin America and the Middle East, school premises are rented, and the strategy has extended to secondary schools' facilities.

According to Olango et al (2021) almost all secondary schools in Kenya face serious financial difficulties due to failure by parents to pay fees. As a result, schools are unable to meet their budgetary estimates, hence Mutua (2021), suggested that schools should raise funds for various purposes by engaging in income generating activities that will help them get more learning resources for quality improvement, school projects and cushioning of schools against sundry debtors (fees defaulters). AJa-Okorie (2021) noted that schools could generate extra income from payment for extra lessons, proceeds from school activities such as sales of student's hand crafts, sales of books and stationery, staging of school plays and raffles, sales of farm products from the school farm. Ofojebe (2023) opined that education could be financed through the following sources: educational levy, donations, rentals, old student's financial assistance and registration fees.

In Kenya, various scholars have investigated the effects on the income generating activities used in secondary schools against various variable. However, none of the studies reviewed have investigated the relationship between income generating activities and school operations as a dependent variable. Lwakasana et al. (2023) for instance researched on Effects of Income Generating Activities in Public Secondary Schools in Transmara Sub-County, Narok County, Kenya. The results of the study revealed that income from income generating activities eased burden on parents, increased enrolment in schools, improved academic performance and was used to motivate both students and teachers. However, the income was insufficient to cater for physical facilities and also did not cater for bursaries for needy students.

Moreover, Chepkoech (2023) did a study on the Impact of Income Generating Activities on Student Retention Rates in Public Secondary Schools in Vihiga, District; Kenya and revealed that a few public secondary schools in Vihiga district embraced IGAs. The activities in place included maize farming, dairy farming and horticulture as well as rental staff housing. The study further established that most of the income earned from income-generating activities in schools went towards teacher's welfare mainly in the provision of meals and academic trips. The other funds went to pay wages and other minor expenditures in schools. There was no school however that used such funds on students or in a way that could facilitate participation of students in schools. The study, however, did not cover the various aspects of school operations that this study intends to study such as teaching and learning facilities provision and maintenance.

Chepkoech (2023), Lwakasana et al. (2023) provide a valuable insight into income generating activities (IGAs) in Kenyan secondary schools. Chepkoech's study in Vihiga District reveals that while IGAs like maize farming and horticulture are implemented, the funds primarily support teacher welfare rather than student activities or infrastructure. Lwakasana et al. (2023) similarly highlight the positive impacts of IGAs in easing parental burdens and improving academic performance in Narok County, yet they note that these funds are inadequate for physical facilities and bursaries for needy students. However, these studies lack

comprehensive exploration of IGAs' effects on broader school operations, particularly on teaching and learning facilities provision and maintenance, which is crucial for understanding the full impact of these activities in Nakuru County.

Methodology

This study employed correlational research design. This is a non-experimental investigation that examines the strength and direction of association among construct utilizing appropriate statistical techniques (Mishra & Alok, 2022). The relationship between these constructs can be positive, negative or not related. The correlational design was chosen because the purpose of this study was to explore the relations between income generating activities and school operations without manipulation of variables. Further the Pearson's correlation coefficient statistics were used to determine the strength and direction of association between the study variables.

This study was conducted in Nakuru County, Kenya. It has a high potential for mixed farming and agri-business. Only three sub counties out of the 11 sub counties have the national schools category, therefore, the research narrowed down to those sub counties as areas of interest. This ensured comprehensive analysis and the applicability of the study findings to similar contexts.

There were 365 public secondary schools in Nakuru County at the time of this study (Nakuru County Director of Education office, 2024). The target population was 365 principals and 365 public secondary school bursars in Nakuru County. The accessible population comprised of 102 principals and the same number of bursars from all public secondary schools in 3 selected sub counties. Random sampling was done using a formula developed by Nassiuma (2000) to get a sample size of 51 school principals and 51 school bursars.

The census was used to select all the principals and bursars of national schools (6), extra county schools (4), and county schools (5). At the sub county level, simple random sampling techniques was used to choose the participants

The researcher used a questionnaire and interview schedules as the main data collection tools. An interview schedule was used to complement the questionnaires since one tool alone may not elicit hidden data.

Ethical considerations: Informed consent, ensuring anonymity and promoting voluntary participation were observed. The information given was treated with confidentiality and was not used for any other purpose other than for academic purposes only.

The collected data was checked for errors and coded, and files prepared using the Statistical Package for Social Sciences (SPSS) version 28. The coded data was then keyed into the files. Qualitative data elicited using open-ended items and interviews were analyzed thematically, and described and summarized using frequencies and percentages, or presented as excerpts. The study hypotheses were tested at .05 level of significance using the Pearson's Correlation Coefficient. This parametric statistical procedure was selected because it is ideal for exploring relationship between variables measured at interval or ration scale (Field, 2018).

Results and Findings

Response Rate

Data was gathered using a bursars' questionnaire and principals' interview schedule. It targeted 51 principals and the same number of bursars. The number of questionnaires administered were 51, the same number of requests for interviews were also sent. The return rates of the two instruments are given in Table 1

Table 1: The return rates of the instruments used to collect data

Instrument	Number administered/invited for interview	Number filled/interviewed	Return rate (%)
Bursars' questionnaire	51	31	60.9
Principal's interview schedule	51	31	60.9

These results suggest that the return rates of both the bursars' questionnaire and principals' interview schedule was at 60.9%. The return rates were low despite the researchers employing several strategies to increase them. The strategies were repeat visits, using the Drop Off, Pick Later (DOPL) technique and assuring respondents of utmost confidentiality. DOPL was expected to boost questionnaire return rates given that it provides respondents with sufficient time to fill questionnaires (Gathii et al., 2019). The return rates were however considered adequate for analysis as they were above Sharma's (2022) 60% "good" mark.

School Characteristics

School characteristics were analyzed with regard to category (National, Extra County, county and sub county schools), type (Girls' boarding, Boys' boarding, mixed boarding, mixed day and boarding and day schools) and location (urban and rural). The results of the analysis are presented in Table 2.

Table 2: School Characteristics

Scale	Characteristics	Frequency	Percentage
School category (n = 29)	National	4	12.9
	Extra county	4	12.9
	County	4	12.9
	Sub County	19	61.3
School type (n = 26)	Girl boarding	7	25.0
	Mixed boarding	4	14.3
	Boys boarding	5	17.9
	Day	10	35.7
	Mixed boarding and day	2	7.1
Location of school (n = 28)	Rural	20	71.4
	Urban	8	28.6

The results reveal that majority of the institutions were sub county schools (61.3%) while the rest were national (12.9%), extra county (12.9%) and county (12.9%). These findings show that all school categories were involved in the study, the sample was thus representative of the population. The results also reveal

that day schools (35.7%) posted the highest percentage and was followed by girls boarding (25.0%). The rest of school types were boys boarding (17.9%), mixed boarding (14.3%), and mixed boarding and day (7.1%). With regard to school location, majority were situated in rural areas (71.4%) while the rest (28.6%) were in urban centers

Relationship between Income Generating Activities and School Operations

The objective of this paper was to find out whether there was a relationship between income generating activities and school operations. This involved establishing the income generating activities schools engage in, estimating the amount of income generated per month in Kenya shillings and rating schools' performance of their operations. The Pearson's correlation test was then used to explore the relationship between income generating activities and school operations.

Income Generating Activities

Data on engagement on income generating activities provided by bursars and principals was analyzed. Table 3 gives a summary of the responses of bursars to items on engagement in IGAs.

Table 3: Income generating activities schools engage in (n = 31)

Activity	Frequency	Percentage
Rental income	9	29.0
Farming	13	49.3
Sale of student handcrafts	1	3.2
Running a business (eg bus, halls, grounds hire)	9	29.0
Registration fees	13	49.3
School plays	-	-
Raffle tickets	-	-
Charging extra tuition	12	38.7

The results indicated that schools engage in farming (49.3%), charging registration (49.3%) and tuition (38.7%). The other IGAs schools engage in are running business (29.0%) and renting houses (29.0%). It is important to note that majority of schools do not engage in IGAs as the percentage posted on all activities was below the average (50%) mark.

The bursars' views on schools' engagement in IGAs was sought. The results of analyzing data which they provided are presented in Table 4.

Table 4: Bursars perspectives on schools' engagement in IGAs (n = 29)

Item	SD	D	A	SA
Income generating activities are necessary to meet expenses in my school	-	6.9	58.6	34.5
The income from our income generating activities is enough to cover our school expenses	75.9	20.7	3.4	-
The money from the government is sufficient to cover all school expenses	82.8	13.8	3.4	-

SD= Strongly disagree, D=Disagree, A=Agree, SA= Strongly agree

The results indicate that majority (93.1%) of the bursars agreed that income generating activities are necessary as they assist in meeting school operation expenses. However, only minority (3.4%) of them

agreed earnings from income generating activities were enough to cover school expenses. Similarly, only a few (3.4%) respondents agreed that money from the government was sufficient to cover all school expenses.

The estimated monthly incomes of schools from IGAs, expressed in Kenya shillings was determined using data provided by the bursars. The estimated monthly earnings were used as the measure of schools' engagement in IGAs. The income ranges from schools' engagement in IGAs are summarized in Table 5.

Table 5: Table 5: Estimate of monthly earnings from IGAs in Kenya Shillings (n = 32)

Income ranges in Kshs	Frequency	Percent
0 to 70000	20	64.5
70001 to 140000	9	29.0
140001 to 210000	2	6.5

These results show that the incomes from engagement in IGAs of majority of the schools ranged between 0 to 70000 Kenya Shillings per month. The incomes of a few schools were in the ranges of 70001 to 140000 (29.0%) and 140001 to 210000 (6.5%). These findings confirm that schools do engage in income-generating activities.

The overall monthly mean income (M = 59032.26, SD = 52176.29) earned from IGAs per month was also calculated. The large standard deviation (SD = 52176.29) is an indication that there was wide variation in schools' monthly incomes from IGAs.

Analysis of data provided by the principals indicated that schools receive funds from various sources. The sources are given in Table 6.

Table 6: Sources of School Funds (n = 31)

Source	Frequency	Percentage
School fees/levies	25	80.6
Capitation from the government	22	71.0
Income generating activities	3	9.7
Grants	2	6.5
Donors (CDF, County, LAFT etc)	11	35.5
Corporate sponsors (eg Equity bank)	3	9.7

The principals reported that the main sources of funds were from school fees/levies (80.6%), capitation from the government (71.0%) and donors (35.5%). The other sources of funds were income generating activities (9.7%), corporate sponsors (9.7%) and grants (6.5%) from which they get funds.

The principals were asked whether the funds mobilized by schools were enough to run their operations. Majority (92.3 %) of the principals complained that funds mobilized by schools were not enough. Only a few (7.7%) indicated that the funds they mobilize were enough to run school operations. With regard to timely release of funds, most (73.1%) of the principals indicated that free secondary school funds did not reach schools in time. The rest reported that they received capitation from the government on time (15.4%) and sometimes it was late (11.5%).

The principals also provided information on strategies used by schools to mitigate against shortage of funds for school operations. The strategies are summarized in Table 7

Table 7: Strategies used by schools to mitigate against fund shortages (n = 31)

Strategy	Frequency	Percentage
Produce own food	7	22.6
Budget/adopt cost cutting initiatives (bulk purchasing, rationing water and lighting)	10	32.3
Staffing (downsize, multi-tasking, use casuals instead of support staff, lobby for TSC teachers)	8	25.8
Encourage parents to pay school fees in kind (eg cereals)	3	9.7
Reduce number of technical subjects offered by schools that require heavy investment	2	6.5

Table 7 shows that schools employ different strategies to mitigate against fund shortage. Cost-cutting initiatives lead at 32.3% followed by staff downsizing at 25.8%. Schools producing their own food was reported by 22.6% of the principals. Parents paying fees in kind was also adopted as a measure at 9.7% and finally 6.2% of the schools reduced the number of technical subjects being taught in their schools.

School Operations

School operations was measured using a set of 16 items in the principals' interview schedule. The principals rated their performance of school operations using a five-point scale. The scale was 1 = Poor (PO), 2 = Average (AV), 3 =Good (GO) and 4 = Very Good (VG), 5 = Excellent (EX). Their responses to the items were scored, summated and transformed into school operations index (overall mean score). The responses to the items were summarized using percentages and mean scores as shown in Table 8.

Table 8: Principals rating of school operations (n = 31)

Operation	PO	AV	GO	VG	EX	Mean	SD
Enrolling/registering students	-	22.6	41.9	25.8	9.7	3.23	0.92
Planning/organising for instruction	-	16.1	64.5	19.4	-	3.03	0.61
Timetables preparation	-	1	48.4	50.6	-	3.52	0.51
Content delivery	-	3.2	61.3	32.3	3.2	3.35	0.61
Assessing learners	-	-	58.1	41.9	-	3.42	0.50
Preparing students for examinations (revision)	-	-	64.5	35.5	-	3.35	0.49
Organising/engaging in co-curriculum activities	-	38.7	29.0	32.3	-	2.94	0.85
Maintaining discipline	-	51.6	38.7	9.7	-	2.58	0.67
Providing support services to learners	-	41.9	45.2	12.9	-	2.71	0.69
Staffing (teaching and support recruitment and training)	-	64.5	35.5	-	-	2.35	0.49
Dealing with staff welfare issues	-	58.1	41.9	-	-	2.42	0.50
Development of physical infrastructure	-	71.0	29.0			2.29	0.46
Maintenance of school assets	-	80.6	16.2	3.2	-	2.23	0.50
Ensuring safety/security	-	22.6	77.4	-	-	2.77	0.43
Maintaining hygiene (water, sanitation, cleanliness etc)	-	19.3	71.0	9.7	-	2.90	0.54
Performance of administrative responsibilities	-	16.1	67.7	16.1	-	3.00	0.58
Schools' operations index						2.88	0.38

The results in Table 8 indicate that the item mean scores ranged from 2.23 to 3.52. The rating of items such as timetables preparation (M = 3.52, SD = 0.51), assessing learners (M = 3.42, SD = 0.50) and content delivery (M = 3.35, SD = 0.61) were relatively high. This is an indication that performance of these school operations was good. The results also indicate that the rating of activities such as maintenance of school assets (M = 2.23, SD = 0.50), development of physical infrastructure (M = 2.29, SD = 0.46) and staffing (teaching and support) (M = 2.35, SD = 0.49) were below average. This implies that schools had challenges carrying out these operations. The results further indicate that the overall rating as measured by school operations index was M = 2.88 (SD = 0.38). Schools' performance of their operations was thus above average.

Hypothesis Testing

The relationship between engagement in IGAs and school operations was established by testing the hypothesis. The hypothesis stated that the relationship between engagement in income generating activities and school operations was not statistically significant. It entailed correlating the estimated monthly income generated by schools from IGAs and the school operations index. The Pearson's correlation test was used to explore the relationship between the two constructs. The results of the test are presented in Table 9.

Table 9: Relationship between Engagement in IGAs and School Operations

Scale		School operations
Engagement in IGAs	Pearson Correlation (r)	.500
	p-value	.004
	N	31

Table 9 shows that the relationship (r = .500) between engagement in IGAs and school operations was positive. The results further show that the relationship between the two variables was statistically significant, r(29) = .500, p = .004. These findings is an indication that engagement in IGAs affects school operations. The findings do not support the hypothesis which stated that the relationship between engagement in IGAs and school operations was not statistically significant. It was thus rejected.

Discussion

The findings from table 2 are in harmony with those of a study by Kitur et al. (2020) which established that majority of schools in the county were based in rural areas.

Further, findings from table 5 confirm that schools do engage in income generating activities. Cheng et al. (2023) contend that school running businesses is an old phenomenon whose main function is to generate income to cover some of the running expenses of schools. These results agree with those of Aja-Okorie (2021) which showed that schools generated extra income by engaging in activities such as sales of raffles, students hand crafts, and produce from their farms and staging of plays.

From table 7 above, the findings show that schools use various strategies to diversify their income streams and cost cutting strategies to mitigate against financial challenges. Similar observations were made by Odigwe (2020) in a study conducted in Cross River State, Nigeria. The study observed that schools engaged in various activities such as included hiring out school buses and halls, renting of school assets and sale of

agricultural products to generate additional funds. The internally generated revenues supplemented government grants and other sources of finance.

The results in Table 9 show that engagement in income generating activities impacts positively on school operations. These findings support those of a study by Chepkoech (2023) in Vihiga County Kenya. The study established that public secondary schools engaged in IGAs and the income earned were used in school operations such as feeding students and staff, paying wages and other minor expenditures in schools. These findings are in tandem with those of Lwakasana et al. (2023) on Effects of Income generating activities in public secondary schools in Transmara Sub-County. The results revealed that earnings from income generating activities led to a reduction of financial burden on parents, increased enrolment in schools, improved academic performance and was used to motivate both students and teachers.

Conclusions and Recommendations

Conclusion

The study explored the relationship between engagement in income generating activities and school operations. The results indicated that some schools engaged in income generating activities such as farming (49.3%), charging registration (49.3%) and tuition (38.7%) fees. Schools' operations index was at 2.88 out of 5 points rating scale. The results also indicated that there was a positive and statistically significant relationship between engagement in income generating activities and school operations, $r(29) = .500$, $p = .004$.

On the basis on the findings, the study concluded that engagement in income generating activities impacts positively on school operations and has the potential to mitigate against financial constraints faced by such institutions.

Recommendations

On the basis of the findings and conclusions of the study, it is recommended that schools be encouraged to engage in income generating activities. This will help in generating funds for their operations

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