



*The Cradle of Knowledge: African Journal of
Educational and Social Science Research
AJESSR - ISSN 2304-2885-p, 2617-7315-e
Volume 7, Issue No.2, 2019
P.O. Box 555 (00202) Nairobi. Kenya
editor@serek.or.ke*

**SOCIETY OF
EDUCATIONAL
RESEARCH
AND
EVALUATION
IN KENYA**

Tuition Financing of Secondary Education and Students' Participation in Siaya County, Kenya

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Abstract

The purpose of this study was to establish how tuition financing of secondary education affects students' participation in public secondary schools in Siaya County. The researcher used mixed methods approach and descriptive research design where both qualitative and quantitative data was collected. The target population was 21,017 comprised of 276 school principals, 6 Sub County Directors of Education and 20,735 Form IV students with a sample size of 2,160. The researcher adopted stratified simple random sampling technique to get respondents from categories of the schools. Data collection instruments were questionnaires, interview schedules and document analysis. Both descriptive and inferential data analysis methods were used in analysing data. The study findings established that tuition financing, had a significant influence on students' participation on public secondary schools in Siaya County.

Key Words: *Tuition financing, Students' Participation*

1. Introduction

Education is expected to equip individuals with knowledge and skills which are critical in securing of employment, increasing lifetime earnings, earning promotion at place of work and being good citizens (Schultz, 1969; Todaro, 1969; Woodhall, 2004). In that view education is more of an economic activity than social because it prepares the youth for the world of work and future responsibilities. This means that investment in education is important because of the expected returns to both the society and individuals. The citizens are able to use acquired knowledge and skills to actively participate in economic activities to generate income for their livelihood and self-actualization. Returns to the society or social benefits can be classified into two, namely direct and indirect (Psacharopoulos & Patrinos, 2019).

The direct returns include; increased productivity and enhanced innovative skills of workers. Education therefore is a principal means of ensuring that there is continuous supply of skilled human resource for development. The knowledge acquired should be labour market relevant to enable them compete globally. Indirect returns include; reduced population growth in case of developed countries, crime reduction in the society, improved health standards, higher levels of environmental conservation and enhanced social cohesion among others (Kiumi & Chiuri, 2005; OECD, 2012). The human resource to assist countries to address environmental issues by participating in improving their immediate environment which assists the governments to achieve international obligations by providing an enabling climate.

Enrolment in secondary school in Kenya in 2008 rose from 1.3 million students to 2.1 million students by 2014 likewise the GER increased from 42.5 % in 2008 to 56.2% in 2013(Ministry of Education [MOE], 2014). This implied increased students' participation and funding against already over stretched national budget hence the need for partnership and development of effective policies and strategies to raise additional resources to enhance students' participation.

Financing refers to allocation of resources for effective and efficient utilization of resources. The funds are drawn from taxes and revenues collected by both National and Federal governments (World Bank, 2010). The governments

use the resources to award bursaries, grants, capitation, scholarships to needy students and to finance free basic education programmes and for capital development in education. Besides government being the source of funding for education, households and private sector including Non-Governmental Organizations (NGO), communities, external partners and Faith Based Organizations (FBOs') also make considerable contribution. Households chip in by paying fees, meeting the cost of uniform, transport; lunch programmes stationaries, construction of classrooms, toilets, and provision of uniforms among others (UNESCO, 2015).

From this it was noted that there was increase in student enrolment and at the same time increase in government funding which in turn exerted pressure on state budget and hence the need for alternative sources. The participation by households is because of expected private and social returns. In addition, it assists in meeting shortfall in national budget and to enhance student enrolment and participation. Public- Private- Partnership in financing of education is not a new phenomenon since most countries have adopted this approach. Households have continued to incur significant levels of expenditure apart from tuition as there is additional expenditure such as transportation, uniforms and private tuition (UNESCO, 2015).

On average the Kenya government spends between 5% and 7% of its Gross Domestic Product (GDP) per capita on education and training. This excludes contributions from the households. The expenditure is higher than any other social sector, yet over 75% of this budget is spent on teachers' salaries with less regard to development and maintenance of school physical infrastructure (MOE, 2017; UNESCO, 2013). Given that over 75% of the money allocated to Ministry of Education goes to recurrent expenditure there are no sufficient resources left for infrastructure development and hence under development of the schools leading to low enrolment and poor quality of education. Following the introduction FDSE programme, government funding was expected to increase to correspond with increased students' participation which therefore implied that household contribution to secondary education was to be decreased.

Participation is commonly measured by the internal efficiency of students' attendance and retention (Muriuki, 2018) Students' performance in national examinations has been universally accepted as a means of measuring students' achievement and quality of education. This has been vital in providing information that assist in facilitating transition of learners to secondary schools in many countries in the world (UNESCO 2013). To improve student participation in secondary education the Sector Plan for Education and Training 2013-2017 recommended expansion of existing secondary schools by increasing the number of streams from one to three, increasing class size from 40 to 45 students and by constructing new secondary schools under the Vision 2030 Flag Ship. The increase in class size was aimed at increasing teacher-student ratio and enforcing efficient utilization of existing human resource. Increasing teacher-student ration was to assist in reducing government's expenditure wage bill for teachers by having few teachers handling more students. In most of the countries in the world school achievement is measured by participation index, while in others by students' performance in national examinations (UNESCO, 2013). Performance in examinations creates distinction in the levels of participation by students and assists in placements.

Specifically, data on Standard 8 enrolment nationally shows a very impressive upward trend with the figures having risen from 746,080 in 2010 to 776,214 pupils in 2011 to 811,930 pupils in 2012 to 839,759 pupils in 2013 to 880,486 pupils in 2014 and finally to 927,789 pupils in 2015 respectively (RoK,2015). The indicators show potential of higher students' participation and expected increased financial implications. A similar scenario is implied in Siaya County. The County primary Gross Enrolment Rate (GER) and Net Enrolment Rate (NER) rose from 50% to 75% and 26.1 % to 62.6% respectively, absolute numbers being 34,807 boys and 29,449 girls in year 2014. But the trend changes at secondary school level given that out of 71,171 students enrolled in Siaya County four years ago only 46,110 students managed to register for Kenya Certificate of Secondary Education (KCSE).

It is on the strength of this that the present study was set to establish the influence of government financing of secondary education on student's participation in public secondary schools in Siaya County. The objective of this study was to determine the influence of tuition financing of secondary education on students' participation in Siaya County.

2. Methodology

The researcher used descriptive survey research design where both qualitative and quantitative data was collected. The target population was 21,017 comprised of 276 school principals, 6 Sub County Directors of Education and 20,735 Form IV students with a sample size of 2,160. The researcher adopted stratified and simple random sampling technique

to get respondents. Data collection instruments were questionnaires, interview schedules and document analysis. Both descriptive and inferential data analysis methods were used in analyzing data.

3. Findings, Results and Discussions

Table 1.1, 12 and 1.3 detail the descriptive statistics for tuition financing of secondary education.

Table 1.1: Free Day Secondary Education Fund in Siaya County

Benefited from FDSE Fund?	Principals	Students
Yes	77 (92.8%)	1,210 (60.6%)
No	6 (7.2%)	787 (39.4%)
Total	83 (100%)	1,997 (100%)

Table 1.1 shows that majority of schools had received free day secondary education fund as indicated by 77 (92.8%) of the principals who confirmed that they had benefited from free day secondary education fund. It showed that FDSE funding policies were effective since the funding addressed tuition, infrastructural development, administrative and other aspects of management. Only 6(7.2%) of the principals reported that they had not benefited from the free day secondary fund. These findings therefore imply that the students were expected to pay tuition costs on top of other essential requirements such as exercise books uniform, meals, and transport among others which raised the cost of education.

From table 1.1 most of the student 1,210(60.6 %) acknowledged receipt of free day secondary education fund, while 787(39.4%) denied benefiting from the same. The responses indicated that most students in Siaya County benefited from free day secondary education fund.

The students were asked to indicate whether they were beneficiaries of any scholarships and the responses are shown in Table 1. 2.

Table 1.2: Demographics of Students on Scholarships in Siaya County

Students Under Scholarship	Students
Yes	188 (9.4%)
No	1809 (90.6%)
Total	1,997 (100.0%)

Results of Table 1.2 show that majority of the student respondents, 1,809(90.6%) were not under any scholarship programme compared to 188(9.4%) respondents who confirmed that they were under scholarship programme. The findings reveal partnerships by other stakeholders in financing of education.

Principals were asked about allocation of funding in their institutions. Findings are shown in table 1.3.

Table 1.3: Tuition funding and participation in Secondary Education in Siaya County

Statements	SD		D		A		SA	
	F	%	F	%	F	%	F	%
Allocation of bursaries to students from economically disadvantaged families had increased access and retention in Schools.	7	8.5	6	7.2	42	50.6	28	33.7
Allocation of scholarships to students had increased students participation in schools	4	4.8	9	10.8	51	61.4	19	23.0
Government capitation to students had increased students participation in schools	7	8.5	8	9.6	48	57.8	20	24.1
FDSE infrastructure funding to schools had enhanced students' enrolment in public secondary education.	4	4.8	4	4.8	34	41.0	41	49.4

Table 1.3 shows that 70 (84.3%) of the respondents agreed that allocation of bursaries to students from economically disadvantaged families had been used to increase access and retention in Schools while 13(15.7%) of the respondents strongly disagreed. These findings showed that allocation of bursary was effective in increasing students' participation in secondary education in Siaya County since majority of the school principals acknowledged that bursary allocation had enabled majority of the students from economically disadvantaged families to remain school. The findings further concurred with Odhiambo (2018) reporting on bursary allocations in Siaya County that about 4,900 students from poor economic backgrounds in Ugenya and Gem Constituencies in the County were set to benefit from KSH.332 million from Siaya Education Bursary Fund by the Siaya County government. In addition, the number of beneficiaries was large which indicates that the sums of money allocated were insufficient and hence there was need for alternative strategies to raise additional resources for students' participation. The provision of scholarships and bursaries by the County government brings out a key point that education financing required partnerships given the scarcity of resources in the public sector.

Table 1.3 show that 70 (84.8%) of the respondents agreed that scholarships to students had been used to increase students' participation in schools and only 13(15.6%) strongly agreed that bursary had increased students' access to secondary education in the County. The findings revealed that there was strong partnership between education sector and private organizations in financing of education which were further confirmed during the interviews by both SCDE from the interviews, the SCDE stated;

'There are many private institutions, NGOs and philanthropic individuals who had sponsored students in various schools''

The findings concur with Muriuki's (2019) suggestions that sponsorship by Co-operative bank Social Scheme (CBSS) offering scholarships to students that aims to cushion the households' budget from effects of poverty since education is one of the most expensive items in any household budget and therefore affects families' ability to pay. This will increase students' participation and save human capital for economic development.

Table 1.3 show 68(81.9%) of the respondents agreed that government capitation to students had been used to increase student's participation in schools while, 15(18.1%) opposed. The findings established that majority of the principals confirmed that government capitation was effective in maintaining students in school hence increased students' participation. These results concur with study findings by Fox *et al.*, (2012) in Mozambique where the number of primary and secondary schools tripled between 1992 and 2010 following development of policy on abolition of user fees that resulted in increased NER by about 35% points. This implies that poverty was an obstacle in school attendance in Siaya County.

Table 1.3 show that while, 75 (90.4) agreed that FDSE infrastructure funding to schools had been used to enhance students' enrolment in public secondary education 8(8.6%) opposed. These findings showed that provision of infrastructure funding is critical to accommodate more students and to keep pace with growing demand for education. The findings suggest that the government needs to mobilize resources to finance education. Most students in Siaya County had benefited from free day secondary education fund. These findings confirmed that the government funding had succeeded in retaining majority of the students in schools and therefore free day secondary programme was successful.

The findings are confirmed by the Kenya government's expenditure on education which is between 5% -7% of its GDP and is in line with Dakar Framework (2000) on EFA that called upon national governments to allocate sufficient resources to all components of basic education by increasing the share of national income and budgets. The findings further lend credence to findings of another research by Greenhill and Ali (2013) who suggests that a "health" level of spending on education should be at least at 3.8% of GDP as a minimum investment needed to ensure improvement in education outcomes through higher completion rates and lower repetition rates.

Factor Analysis for Tuition Financing of Secondary Education

To determine constructive validity, Principle Component Analysis was applied. Factor loadings and communalities based on a principal components analysis with Varimax rotation for 4 items was conducted to provide best-defined factor structure for the Tuition Financing of Secondary Education construct. This shown in table 1.4.

Table 1.4: Factor loadings and communalities based on a principal components analysis with Varimax rotation

Item	Factor loading	Communality
Allocation of bursaries to students from economically disadvantaged families had increased access and retention in Schools.	.741	.65
Allocation of scholarships to students had increased students' participation in schools	.832	.62
Government capitation to students had increased students' participation in schools	.755	.69
FDSE infrastructure funding has enhanced students' participation in public secondary education	.856	.59

The communalities were all above 0.3 thresholds (Frydenberg, 1993); this confirmed that each item shared some common variance with other items, four-point Likert scale that we used in our questionnaire. All the five items in this analysis had primary loadings over .5 thresholds (Frydenberg, 1993). Thus, our dataset was acceptable for further analysis.

Correlation between Tuition Financing of Secondary Education and Students' Participation in Secondary education

Pearson Moment Correlation coefficient was used to determine the strength and direction of the relationship between tuition financing and students' participation in secondary education. The findings are as shown in table 1.5.

Table 1.5: Correlation between Tuition Financing and Students' Participation in the County

		Students' Participation
Tuition Financing	Pearson Correlation	.344**
	Sig. (2-tailed)	.000
	N	83

It's evident from the findings of table 1.5 that tuition financing had a significantly moderate positive relationship with the students' participation in public secondary schools (R = 0.344, p = 0.000). Lyndsay (2009) indicated that a coefficient between +0.5 and +0.3 or -0.5 and -0.3 indicates a moderate relationship. It can therefore be concluded that tuition financing had a significantly moderate positive relationship with the students' participation in public secondary schools in Siaya County.

Regression Analysis

The study adopted Simple Linear Regression model to determine how tuition financing of secondary education influenced students' participation in public secondary schools. The model sought to test the following null hypothesis:

H₀₂: Tuition financing of secondary education has no significant influence on students' participation in public secondary schools in Siaya County.

Table 1.6: Simple linear regression between Tuition Financing of Secondary Education and students' participation in Siaya County

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.344 ^a	.118	.107	.53229		
<i>a. Predictors: (Constant), Tuition Financing</i>						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.074	1	3.074	10.850	.001 ^b
	Residual	22.950	81	.283		

Total		26.024	82			
<i>a. Dependent Variable: Students' Participation</i>						
<i>b. Predictors: (Constant), Tuition Financing</i>						
Coefficients^a						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.100	.312		6.738	.000
	<i>Tuition Financing</i>	.338	.102	.344	3.294	.001
<i>a. Dependent Variable: Students' Participation</i>						

From the ANOVA results shown in table 1.6, it is evident that the simple linear regression model well fitted the dataset [F (1, 81) = 10.850, P = 0.001 < 0.05]. Note that the model (tuition financing of secondary education) explained 10.7% of the variation in the students' participation in public secondary schools in Siaya County (Adjusted R Square = 0.107). The results of coefficients in table 4.19 show that tuition financing of secondary education had a statistically significantly contribution in the prediction of the students' participation in public secondary schools in Siaya County, (B = 0.338, t = 3.294, p=0.001 < 0.05); thus we reject the null hypothesis and conclude that tuition financing of secondary education has a significant influence on students' participation in public secondary schools in Siaya County by 0.344 standard units. The simple linear regression model to predict students' Tuition financing had a positive standardized beta coefficient = 0.344 in the coefficients results of table 4.19; an indication that a one unit change in the tuition financing of secondary education is likely to result to an improvement in the students' participation in public secondary schools in Siaya County participation in public secondary schools in Siaya County using tuition financing of secondary education was as follows:

$$\text{Students' Participation} = 2.1 + 0.338 \text{ Tuition Financing}$$

These findings imply that there is high demand for secondary school education and this is motivated by the free secondary education funding. In Sub-County schools, enrolment ranged from 128 to 933, and the total enrolment in the 17 secondary schools was 8,452 for the 2008 to 2014 period. The total Free Secondary Education funding was 75,509,340.00 Kenya shillings. The 12 medium secondary schools had a total enrolment of 16,058.00 and the total FDSE funding was Ksh151, 655,110.00 while the 5 County secondary schools had a total enrolment of 15,261 and the total FDSE funding of Kshs. 146,060,685.00. These findings compare favourably with those of economic survey, 2015 (MOE, 2015) at the National level. The economic survey, (2017) (MOE, 2017) indicates that national transition rate trend from 2010 to 2014 was 68.9%, 69.4%, 68.4%, 76.8% and 80.4% respectively. The Economic survey, (2017) attributes the improvement from primary to secondary transition rate partly to the implementation of FDSE policy and expansion of physical facilities Bondo and Ugenya Sub-Directors of Education in the interviews resounded similar views that:

'In the Sub-County there are many students who are benefitting from various programmes. Supporting institutions included both public and private organizations like; Equity bank, Cooperative Bank, Kenya Commercial bank, Plan International, Nilinde, Alumni Associations, CDF and Schools' Scholarships Kits and philanthropic individuals. The banks sponsor students who have attained 350 Marks and in KCPE. The organizations provide students with all types of assistance which includes uniforms, school fees, personal shopping for the students''

In addition, perusal of documents on capitation disbursement schedules at the SCDE offices confirmed that all students had been allocated right amounts as per the fees guidelines and were in schools as per the class attendance registers. Infrastructure disbursement schedules in the same offices showed. Small number of schools had not benefitted from the free day secondary fund. Therefore, students were expected to pay tuition costs on top of other essential requirements such as exercise books, uniform, meals, and transport among others which raised the cost of education. This limits students' participation in terms of facilities and resources. These findings concur with observations by Lesotho Counsel for High Education, (2012) on government funding to higher education institutions in Lesotho which had received only a quarter of the budget which compromised students' participation levels and operations of the institutions thus resulting to decline in schools' enrolment in marginalized regions. This therefore shows that government financial assistance was critical in students' participation in Siaya County particularly among the poor households.

Allocation of bursary was effective in increasing students' participation in secondary education in Siaya County. The findings corroborate the assertions by the World Bank (2006); OECD (2012) study on voucher financing approach in Columbia and North America states where the voucher funding system was used to increase students' participation among the low-income families. This brings out a crucial point about partnership between the private and public sectors in mitigating the adverse effects of poverty and other barriers which require consolidated efforts from all sectors given that some of the challenges are in other sectors and not in education. There was strong partnership between education sector and private organizations in public financing of education. The findings also showed that majority of the students could not afford to raise fees for secondary education without support from either government or other stakeholders in education. This may have been due to high poverty and dependency rates as asserted by the Siaya County Integrated Development Plan (2013-2017).

Government capitation was effective in maintaining students in school hence increased students' participation. These findings concur with study findings by Alloush, (2010) & UNESCO (2012) that in Ethiopia, Ghana, Kenya, Malawi, Tanzania and Uganda which revealed that fee abolition created increase in students' enrolment especially among the disadvantaged. Expansion of existing school facilities, maintenance and construction of new schools was critical in education as it expanded facilities to accommodate more students and to keep pace with the growing demand for education. These findings concur with study findings by Fox et al., (2012) that in Mozambique the number of primary and secondary schools tripled between 1992 and 2010 and at the same time construction of new schools continued. The policy coupled with the efforts to abolish user fees resulted in increased Net Enrolment Ratio by about 35%.

4. Conclusions

Concerning financial assistance, the study concluded that tuition financing of secondary education had statistically significant influence on students' participation in public secondary schools in Siaya County. The findings revealed that bursaries allocated to students from economically disadvantaged families had increased students' participation in secondary education in Siaya County. Also, those secondary schools' scholarships and government capitation to students apart from FDSE had increased students' participation in secondary schools in the sampled schools. However, the statistics showed that most students had not received scholarships and bursaries to support their secondary education and that the government capitation was not adequate thus leading to some students to drop out of school hence contributing to the inability of the government to attain its set target of 100% retention rate.

5. Recommendations

Based on the findings of the study the researcher recommends that; Free Secondary Education funding should be increased so as to achieve the objectives of Free Secondary Education policy fully.

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