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Categories of Public Secondary Schools and its Effects on the Costs of the Development Projects in Bungoma West District, Bungoma County, Kenya

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Abstract: ***Government expenditure on education is a matter of great concern given its heavy weight on the exchequer. It is for this reason that managers of educational institutions should acquire and utilize school resources in the most cost effective manner to bring about required changes .This study sought to investigate the school categories and its effect on the cost of development projects implemented in Bungoma West District of Bungoma County in Kenya. To ensure that all divisions within the district and categories of schools were taken care of stratified sampling was used in selection of the sample. Purposive Sampling was used to select a sample of 30 head teachers, 30 Parents Teachers Association (PTA) and Board of Governors (BOG) chairmen, 120 teachers and 120 students. The District Education Officer was used as a key informant. Descriptive survey design was adopted in this study. Data were collected through questionnaires, an interview, and observation schedules. Data were analyzed by descriptive statistics which included frequencies, and percentages. The inferential statistics; ANOVA and Pearson test statistics were also used. The study established that school categories significantly influenced the cost of development projects and hence the null hypothesis which stated that there was no significant difference in the cost of development projects implemented by the different categories of public secondary schools was rejected.***

Keywords: Public Schools, School Projects, School Category, Education

1. Introduction

The school community benefits from investment projects directly or indirectly hence the need for good management. There is need for every school management to understand the community's needs before they invest in projects. The education system in Kenya has been facing problems concerning its financing at all levels. At the moment the major sources of education finance include the government, local communities and sponsors. However these major funding groups in the education sector are experiencing financial constraints due to increased demand for education (Olembo, 1985).

A school development plan is a line of action designed by the school to achieve desired targets within a given time frame using available resources. The process of school development planning involves determining school needs (financial and physical), prioritizing the school needs (considering the agency and the cost of each need), preparing action plans, implementing and monitoring the plan (Lewis, 1992).

Selection and management of projects sometimes fail to support the strategic plan of the schools. This happens when strategic plans are written by one group of managers, project selection by another group and implementation by another. These independent decisions by different groups of managers create a set of conditions leading to confusion, conflict and frequently unsatisfied customers. Under these conditions resources are wasted in non-value adding projects (Morris, 2007). One major goal of a project is to satisfy stakeholders needs (Clifford and Larson, 2003)

Most organizations face a central problem of autonomy and control. At the top of the hierarchy, managers try to develop a unified mission or strategy, using commands and rules and their means to create centripetal forces. This is mostly experienced by the organizations, particularly schools that depend on external sources for their projects' financing. By contrast middle managers can be expected to use autonomy to create centrifugal forces that pull the organization in the direction of balkanization (Bowman, 1966). Too much autonomy and too little control at the Centre can undermine motivation among those who are furthest from the source of power (power in this case is the finance). This can ultimately result in the project not meeting the expected purpose (Dasgupta and Serageldin, 2000).

The challenge of projects is to balance the control necessary for a unified strategy with sufficient autonomy to foster initiative and responsiveness (Aldin and Stahre, 2003). Public schools face a two-step challenge of balancing freedom and control of both the project under way and the finances available to them. The issue of democratic control over management action is essential to the political process because public agencies have awesome powers of compulsion. They can tax, regulate, inspect, arrest and reward through subsidies purchases or protection (Sarkis and Tavulli, 2004). Projects are the building blocks of development and successful projects are the means used to translate plans into reality (Mwosa, 1987). In most complex projects, the executives shaping and assigning major work streams assume the vast majority of the responsibility for the project's success. They delegate execution risk to project teams, which are not only responsible for staying on time and on budget, but they also inadvertently leave themselves carrying the full burden of white space and integration risk. In World Bank projects, as in most complex and strategically critical efforts, these risks can be huge (Saaty, 1980).

When executives assign a team's responsibility for a project, the team is free to find what activities will be needed to complete the project and how these activities will fit

together. This approach puts white space and integration risk on the shoulders of the people doing the work, they can discover on the spot what is working and what is not working and in the end they are rewarded not for performing a series of tasks but for delivering real value. Their success is correlated with the success of the organization which will come from not only implementing known activities but also identifying and integrating new ones (Sarkis and Tavulli, 2004). Despite the obvious benefits of Project Management Based initiatives, few organizations; especially public secondary schools should use them to replace the horizontal activities altogether. Because of their economies of scale, horizontal activities are a cost efficient way to work (Wang & Chen 2007). It is the job of the leadership team to balance project management based initiatives, help spread insights from team to team and blend everything to an overall project goal.

2. Hypothesis

A null hypothesis was postulated for the study thus: There is no significant difference in the cost of development projects implemented by the different categories of public secondary schools.

3. Methodology

3.1 Research Design

The researcher chose descriptive survey because it enables one to collect data very fast and to understand the situation about factors influencing implementation of types of development projects within the short and time available (Mugenda and Mugenda, 2003). The design assisted the researcher to be able to understand factors that were considered when implementing types of development projects. However, the descriptive survey is not the most effective research design. One of its weaknesses is that respondents who do not understand the topic may not give the correct data. The respondents who also fail to respond to questions they feel are meant to evaluate them. To solve these problems, more than one research instrument was used for verification of the data.

3.2 The Target Population

A target population is defined as all the persons and objects with which the researcher is concerned (Netshifhefhe, 2001).The District had 42 Public secondary schools as per records availed in January 2010 at the District Education Office DEO (Bungoma West Reports, 2010).The study targeted: DEO Bungoma West, 42 Head teachers, 42 BOG chairmen, 42 PTA chairmen 168 student class representatives and 168 teacher class representatives .Head teachers and teachers were chosen in this study because of their crucial role in the implementation of the learning programme. In order for an educational process to succeed, teachers play a major role since they bridge the policy makers and the recipients /students (Hawes, 1979).The remaining group (BOG and PTA chairpersons, and students) of the population targeted are major stakeholders in the schools.

3.3 Sampling techniques and Sample size

The principle objective of any sampling procedure is to secure a sample, which, subject to limitation of size will produce the characteristics of the population especially those of immediate interest as closely as possible (Kalton, 1993).Since this was a small District with only 42 secondary schools, the four divisions in the district were categorized into four strata using stratified sampling technique. It is often desirable to use stratified sampling when the population consists of sub- groups or strata that may differ in the characteristics being studied. This technique was preferable because it enabled the researcher to study differences that existed between various sub-groups (Ary et al, 1996). The stratified sampling technique was used because it gives a reflection of the major groupings within the population. Random sampling technique was used to select seven (7) schools from three (3) strata and nine (9) schools in the fourth strata with slightly a larger number of schools. Therefore, thirty (30) schools out of forty four (44) in the district were selected. The main factor considered in determining the sample size is to keep it manageable (Kerlinger, 1975). Sampling is indispensable to the researcher because availability of time, money and do not permit all members of the population to be studied (Mugenda and Mugenda, 2003).On this basis, the percentage of the respondents was purposively selected from the four strata identified and per category of schools as follows; Head teachers, teachers, students, PTA and BOG chairpersons (71%).The sample size also included the DEO of Bungoma West District (100%) because each district in the country has only one DEO. Purposive sampling technique allows a researcher to use cases that have the required information with respect to the objectives of the study (Nachmias and Nachmias, 2003).

4. Results and Discussion

4.1 School Category and the Cost of Development Projects

The second objective of this study was to find out the relationship between the categories of the public secondary schools and the costs of development projects implemented. To achieve this objective the researcher collected data on the school categories and the average annual cost of the projects implemented by each public secondary school in the district.Four main categories/types of schools were identified namely; provincial boys', provincial girls', district mixed day and district mixed day/boarding. Table 4.7 shows the total and average annual costs of the development projects implemented by the different categories of public secondary schools.

Table 4.7: Mean Annual Expenditure on Development Projects

School type/category	*Frequency*	*Total annual cost in millions of Ksh.*	*Average annual cost in millions of Ksh.*
Provincial boys	4	17.4	4.35
Provincial girls	5	25.8	5.16
District mixed day	17	43.75	2.57
District mixed day/boarding	4	18.6	4.65

Source: Field Data

The Table reveals that the mean annual expenditure on development projects was highest in provincial girls' schools at Ksh 5.16 million followed by mixed day boarding schools at Ksh 4.65 million. Provincial boys' and district mixed schools were lowest at ksh 4.35 million and ksh 2.57 million respectively. By implication, the study seems to reveal that stakeholders may be investing more in girls' schools' development projects and least in boys' schools. The study seems to resonate well with the ongoing efforts by government, development partners, the civil society and other stakeholders for the need to invest more in girl child education which has remained low for decades. The findings of this study will be good news for stakeholders (King and Hill, 1993).

To find out the effect of the different categories of public secondary schools on the cost of development projects implemented, this study was guided by the following null hypothesis:

Ho1: *There is no significant difference in the cost of development projects implemented by the different categories of public secondary schools. Analysis of Variance test statistics (ANOVA) was conducted to analyze this objective. Information on the results of the ANOVA test statistic was recorded in table 4.8.*

Table 4.8: Effect of school categories on the cost of development projects

	Sum of squares	*df*	*Mean square*	*F*	*Sig.*
Between groups	3.477	3	1.159	3.866	0.021
Within groups	7.794	26	2.998		
Total	**1.127**	**29**			

Source: own computation

Table 4.8 shows that there was a significant difference in the cost of the development projects implemented by the different categories of public secondary schools. Therefore the null hypothesis stating that there was no significant difference in the cost of Development projects implemented by the different categories of public secondary schools was rejected (df 3, f statistic= 3.866 p value p<.05). However the results of the analysis of variance for the difference between groups did not show the direction of the differences.

This necessitated a post hoc comparison tests that were purposed to demonstrate the direction of the difference in means between the different categories of schools. The post hoc tests were justified because they gave more insight in the significance differences between the school categories and the cost of development projects implemented by public secondary schools, including the direction of the differences. The ANOVA test only shows that there is an overall difference between group means but it does not show which specific groups differed. Therefore post hoc tests are run to confirm where the differences occurred between the means in their specific groups. The results were as tabulated in table 4.9.

Table 4.9: Post-hoc Pair Wise Test on the Difference in the cost of Development Projects Implemented by the Different Categories of Public Secondary Schools

(i)School category	*(j)School category*	*Mean Difference*	*95% confidence interval*		
		(i-j)	Sig.	Lower	Upper Bound
DMD	DMD/B	-2.021E6	.046	-	-42804.46
	PB	-1720588.235	.085	-	257195.54
	PG	-2.531E6	.008	-	-719975.81
DMD/B	DMD	2020588.235	.046	42804.46	3998372.01
	PB	300000.000	.808	-	2816567.72
	PG	-510000.000	.664	-	1877425.76
PB	DMD	1720588.235	.085	-257195.54	3698372.01
	DMD/B	-300000.000	.808	-	2216567.72
	PG	-810000.000	.492	-	1577425.76
PG	DMD	2530588.235	.008	719975.81	4341200.66
	DMD/B	510000.000	.664	-	2897425.76
	PB	810000.000	.492	-	3197425.76

The mean difference is significant at the 0.05 levels.
Source: own computation

Key
DMD: District mixed day. PB: provincial boys.
DMD/B: District mixed day/boarding. PG: provincial girls.

Table 4.9 : shows that there were significant difference in means between public district mixed day and public district mixed day/ boarding schools in favour of District mixed day school/Boarding (-2.021), (P<0.05), (P=0.05). Similarly, significant difference in means were found between public mixed day and public provincial girls schools (mixed day =-2.531), (P<0.05). This implies that the cost of development projects differ according to the different categories of schools and this led to the rejection of the null hypothesis (P<0.05).

It was evident from the results that the costs of school development projects largely depended on the category of the schools and their status. The low status schools which were mainly the district day and district day/mixed schools were young upcoming schools with low school enrollments. They therefore implemented projects which required little funds as compared to well established schools. Most of the development projects implemented in these schools were mainly physical infrastructural projects because they urgently required these facilities.

5. Conclusion

Regarding school categories and the costs of development projects, there was a significant difference in the costs of development projects implemented by the various categories of public secondary schools. There was an indication that the school categories namely; district day, district day/boarding, provincial girls' and provincial boys' schools could have influenced the cost of development projects implemented. Therefore, the null hypothesis stating that there is no significant difference in the cost of development projects implemented by the different categories of public secondary schools was rejected. This study therefore revealed that public secondary schools are categorized and these categories are a major determinant of the cost of the project with privileged categories implementing massive projects. Thus, the category of the school was an indicator of how well it was endowed with resources.

6. Recommendations

Based on the forgoing findings, the study recommended that public secondary schools should not be categorized as this causes disparity in development of school facilities.

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