

MOBILIZING SOCIAL CAPITAL FOR SCHOOL CONSTRUCTION PROJECTS IN PUBLIC PRIMARY SCHOOLS

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ABSTRACT

Often governments tap in on social capital to supplement their development efforts. By participating communities in development, the load is shared. The study examined how communities participate in school construction projects in primary schools in Somaliland and how community participation in school construction projects influences the performance of those projects. The study used a correlational design and was undertaken as a cross-sectional survey. The target population was 920 primary school headteachers in all the 13 regions of Somaliland and 82 District Education Officers. A sample of 257 headteachers was drawn using multistage sampling where purposive sampling and stratified random sampling with replacement were used to sample headteachers while 22 DEOs were sampled using simple random sampling. Data was collected from headteachers using questionnaires and from DEOs using semi-structured interviews. The questionnaire was pilot tested on 28 headteachers. The response was received from 247 headteachers and 20 DEOs. Variables relationships were analyzed using path analysis and tested using t-tests at $\alpha = 5\%$. The main methods used to involve the community in primary schools' construction projects were: involving them in decision-making processes, volunteering labour and fundraising. An insignificant negative correlation between community participation and performance of construction projects ($r = -0.105$, $p = 0.1$, $\alpha = 0.01$) indicated that community participation was not an important predictor of performance of construction projects. A negative and insignificant total effect of community participation on performance of construction projects [$b = -0.187$, $t = -1.651$, $p = 0.100$, $R^2 = 0.011$, $\alpha = 0.05$] indicated a weak inverse relationship. The study found that community participation had no significant influence on the performance of construction projects. Community participation in public primary schools in post-war Somaliland is a policy-driven initiative and a fill-gap measure of deficiencies left by the government's low and inadequate capitation to schools. Low social capital in the communities participated in projects coupled with the costs and the downsides of the community participation process can result in a negative impact on the performance of those projects. Urban schools tend to benefit more from community participation than rural schools due to higher social capital stocks in urban communities as compared to rural communities.

Keywords: Community Participation, Performance, Construction Projects, Social Capital, School Development, School Projects.

1. INTRODUCTION

In armed conflict situations, education tends to suffer major setbacks since schooling requires a peaceful environment. When peace is re-established, restoring schools and education normalcy is often left to the local communities as the government's revenues and abilities tend to be significantly curtailed while its burdens tend to have significantly increased. Education authorities, stifled in budgetary provisions often encourage community

participation to utilize the community's social capital; resources, information, and networks; among other community possessions, to restore education and schooling (Trigilia, 2001). Even in countries that have not suffered conflicts, governments seek to rally social capital in education development and expansion efforts.

Social capital is a kind of investment available at different levels in every community and which can be mobilized, accessed and used in social projects (Daly, 2010; Putnam 1993; Jiang & Carroll, 2009). It provides capital through networks and relations, cognitive resources like information, and normative resources like the trust that organizations can tap to realize objectives that would otherwise either not be realized or be realized at much higher costs or in a longer period (Trigilia, 2001). Social capital is a strategic resource that sees regions with a high concentration of it, such as urban metropolis areas, developing faster and achieving more. It is a major contributor to the realization of school development. In rural and marginalized areas, social capital base tends to be low but its importance in attaining development tend to be high. Education establishment and development is one of the areas that governments seek to rally social capital and although there can be other methods of rallying social capital for education development, community participation is most commonly used.

A community consists of persons in social interaction setting within a geographic area and having one or more additional common ties (Hillery, 1955). Since Hillery proponed that definition, communities have evolved with modern development, ICT and other technologies such as social media and e-commerce mutating the basic structure of a community. As such, local community members are no longer found in one geographical area but are spread out over other geographical areas including the diaspora. In Somaliland, a significant portion of the social capital that local schools harness for school development comes from the diaspora. Community participation refers to the involvement of 'local' people in processes that concern or affect them. One reason for involving local people in the planning and decision-making processes for development projects that concern them is the notion that they have understanding, familiarities and discernments into what will work for them, what will not work and why. Community participation in education is recognized as important in the struggle to remove obstacles to realizing quality education for all (Foster 2012). Effective community participation in schools can increase school performance in learning outcomes, school resources management, enrollment rates, retention rates and overall impact of education in the community. However, the main reason why schools seek community participation is to rally community social capital – human, economic, material, networks or information - for the schools' development and wellbeing. School development is one area that schools seek to engage the local community in school development projects. In Somaliland, the government instituted a school infrastructure policy that sought to participate in local communities at the primary school level in school building, mobilizing school enrollment and school management. These entailed the formation of Community Education Committees (CECs), a body that brought together the schools' administration and members of the community to address and resolve education matters in the school such as school infrastructure (MoEHE, 2012; Tines, 2011).

Schools undertake construction projects to maintain and repair existing infrastructure as well as put up new ones. Since infrastructure projects tend to require significant capital, schools seek to tap into the community to mobilize the capital. Once the school construction projects are complete it is necessary to evaluate their performance. This entails measuring the projects' realizations against the objectives set for the project. Numerous authors have

proposed different project performance evaluation criteria among them: Freeman and Beale (1992), Vandevelde, Dierdonck and Debackere (2002), Shenhar, Levy and Dvir (1997), Shenhar, Tishler, Dvir, Lipovetsky and Lechler (2002), Lim and Mohammed (1999), Atkinson (1999), Chan and Chan (2004), and Sadeh, Dvir, and Shenhar (2000). The study customized a project performance evaluation criteria based on Chan and Chan (2004) proposed indicators for measuring the performance of construction projects. The following criteria were used: realization of set standards: quality, features and safety; realization of planned deliverables: objectives, outputs and outcomes; completed projects' variance from the initial plans, the functionality of completed projects; end-user satisfaction; construction team satisfaction with the completed projects.

The study was conducted in primary schools in post-conflict Somaliland where the government has embarked on harnessing social capital to rebuild schools and re-establish education in the state. The study sought to determine how local communities participate in school construction projects and the influence of community participation on the performance of construction projects.

The study sought to test the following model.

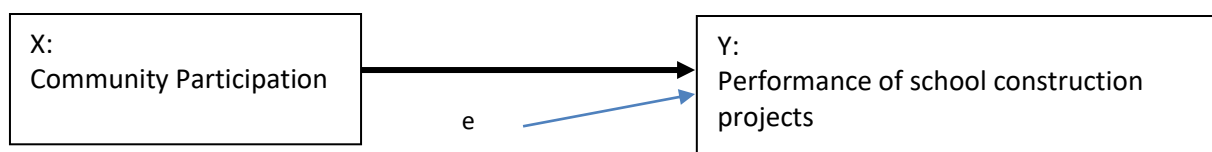


Figure 1: Conceptual model

2. RESEARCH METHODS

The study was a cross-sectional survey. The study's target population was 1002 respondents comprised 920 headteachers from 920 public primary schools in Somaliland and 82 District Education Officers (DEOs) in the 82 administration districts of Somaliland. To determine the appropriate headteachers' sample for the study, the large population sample size formula ($n = z^2 (P)(Q) / \alpha^2$) was used with the Cochran finite population correction at 95% level of confidence. The resulting sample size was 279 (257 headteachers and 22 DEOs). To draw the sample, purposive sampling was used to sample 7 regions from 13 administrative regions, resulting in a sample of 735 headteachers and 56 districts. Proportionate stratified random sampling with replacement was applied to draw the final sample of 257 from 735 headteachers. From the 56 purposively sampled districts, 22 DEOs were randomly sampled for the study. The headteachers were participated in the study by filling self-administered questionnaire's through a drop-and-pick later method, while DEOs participated through semi-structured interviews. The questionnaire had 10, 5-point Likert scale items for each variable, and open-ended items. The headteachers and DEOs were the units of observation while the schools were the units of analysis.

The questionnaire was pilot tested on 28 respondents. The Cronbach alpha coefficient of internal consistency was $\alpha = 0.866$ for X, and $\alpha = 0.826$ for Y; indicating the research tool was reliable. Pilot testing, empirical literature review and peer review were used to ensuring the validity of the instrument. Quantitative data analysis was done using descriptive statistics, correlation analysis and regression analysis techniques.

The following hypothesis was tested:

H_0 : Community participation (X_1) does not influence the performance of construction projects (Y).

H_1 : Community participation (X_1) significantly influence the performance of construction projects (Y).

3. ANALYSIS OF RESULTS AND DISCUSSION

The study's attained a response of 247 (96.1%) headteachers and 20 (90.9%) DEOs. To assess the data's suitability for use of parametric tests; normality, multicollinearity, homogeneity of variance and independence of error term tests were conducted. The Shapiro-Wilk test showed the data for community participation [$D(247) = 0.992, P=0.242$] and the data for performance of construction projects [$D(247) = 0.994, P=0.454$] to be normal. The tolerance value (TV) and its related inverse VIF were $TV= 0.987, VIF = 1.013$ indicating the absence of multicollinearity. The Levene statistic was $F(29,212) = 1.546, P = 0.051$, indicating that the variances in Y were constant at different values of the community participation. The Durbin Watson statistic, $D = 2.070$, indicated independence in the error terms. The data was, therefore, suitable for the use of parametric tests.

3.1 Descriptive analysis

The headteachers' responses for the Likert scale items were totalled for each variable per school on a scale of 10-50 and binned into three groups: disagree, not sure and agree. The results are shown in Table 1.

Table 1: Binned Variable Data

Variable	Response category	Frequency	Per cent	Mean	Standard Deviation
Performance of construction projects	Disagree/low (10<26)	68	27.5	29.60	7.12
	Not sure (26<34)	109	44.2		
	Agree/high (34≤50)	70	28.3		
	Total	247	100.0		
Community participation	Disagree/low (10<26)	0	0	36.74	4.00
	Not sure (26<34)	53	21.5		
	Agree/high (34 ≤50)	194	8.5		
	Total	247	100.0		

The findings show that the respondents disagreed as to whether the performance of construction projects was high or low with 68 (27.5%) of respondents reporting low performance, 70 (28.3%) reporting high performance and 109 (44.2%) of the respondents not sure. The mean score of 29.60 was in the "not sure" category showing that the respondents were lukewarm on whether the performance of construction projects was low or high. The standard deviation was 7.12 indicating a significantly high spread in the responses for this variable considering the bin size. This indicates that there were schools that had had a high performance of construction projects that they had to embark on, other schools had low performance while others had a mixture of both: some projects performing well while others realized dismal results.

On the individual Likert scale items the findings showed that school construction projects largely realized the standards set, the stated deliverables and, the intended functionalities. Further, the study found that teachers and school management tended to express satisfaction with the outcome of construction projects they had undertaken in their schools. School

construction projects were found to have completed with significant variances from initial plans in most schools. There were reported cases where the project design teams and project implementation teams had expressed displeasure with the outcomes of the project. Some school construction projects had received negative inspection reports from the Ministry of Education and Higher Studies [MoEHS] for failure to meet set standards but that did not result in the projects being discontinued.

For community participation, the composite mean was 36.74 indicating that overall, the respondents believed that community participation in their schools was high. Of the 247 respondents, 194 (78.5%) of the schools reported high community participation in school construction projects. No school reported low community participation while 53(21.7%) schools were not sure whether their community participation experience could be categorized as low or as high. The standard deviation (4.00) indicated that the responses were narrowly spread around the mean and there were no outliers in the data indicating the respondents agreed that community participation in public primary schools was high. This shows that schools highly depended on the community when undertaking school construction projects. Headteachers sought community involvement and support in school projects since MoEHS was largely unable to support development in schools (MoEHS, 2017). Community participation in primary schools was, therefore, a fill-gap measure rather than an enrichment. As such, its inclusion in school construction projects may not necessarily increase the projects' performance but rather an aversion of failure.

An analysis of the individual questionnaire items yielded the following findings. Community members spent significant time in school construction-related activities. Local communities participated in school construction projects in their areas. Community representatives were participated in project decision making - though not in all project activities. Most communities perceived full ownership of completed school construction projects. Community members were satisfied with the schools' participation process. Most schools had realized their community participation goals. The CEC process was only one of the numerous ways the schools participated the community in school construction projects. Although not all community clans were represented in the CECs, CECs were considered representative of the community.

3.2 Community participation methods adopted by the schools

By government policy, public primary schools in Somaliland are required to establish CECs. CECs are therefore the official way through which public primary schools participate their local communities in school matters and projects. The study sought to establish which other methods were used to participate local communities in school construction projects. The findings are shown in Table 2.

Table 2: Methods of Community Participation in School Construction Projects

Method	Frequency	Percentage
Fundraising	220	89.07
Donating community land	67	27.13
Volunteering labour	221	89.47
Participating in decision making such as project committees	226	91.5
Donating building materials	111	44.94
Donating infrastructure facilities such as classrooms	3	1.21
Other	32	12.96

Participation in decision-making processes was the second most commonly used method of participating the community in school construction projects with 226 (91.5%) of the 247 schools surveyed using it. Volunteering labour came in third with 221 (89.47%) of the schools reporting using it. Fundraising was the fourth leading method of participating local communities in school construction projects with 220 (89.07%) schools deploying it. Donating building materials come in fifth with 111(44.94%) of the schools using the method. Donating community land for school construction came in sixth with only 67(27.13%) of the 247 schools surveyed reporting using it. Donating complete infrastructure facilities such as classrooms had the least occurrence with only 3 (1.21%) of the 247 schools surveyed reporting having benefited from that method. Other methods included: mobilizing community support and goodwill for school construction projects and donating furniture and installations (such as blackboards) needed to make the completed construction projects operational.

Such community participation can have a positive influence on construction projects in schools by reducing the project costs through donated materials and labour, and enhancing project realization through fundraising for the projects. On the downside, community participation efforts can mismatch the project requirements and thus result in no impact on construction project performance in schools. In one interview, a headteacher lamented how the community volunteered much labour for classroom construction but this had little impact because the school had a shortage of construction materials and the project eventually stalled.

These findings show that not only is community participation in school construction projects born of national policy, but it is also both essential and critical for primary schools to undertake and realize vital construction projects to rehabilitate and build infrastructure facilities necessary for their core role of offering education services. Community participation in Somaliland's primary schools was found to be widespread and to have a perceived positive contribution to the performance of construction projects in that it fills the gaps that MoEHS have left in schools. With the high demand for education causing strain on existing school infrastructure facilities, community participation is used to develop schools as the national government, short of funds is unable to finance school development in most districts. This can be construed to result to better performance of construction projects in schools but the reality is that without community participation many schools would have no construction projects at all as government capitation is little and hard to come by. Community participation in schools largely plays the role of facilitating schools to mount development and construction projects in the first place.

3.3 Correlation Analysis

The Pearson correlation coefficient between community participation and performance of construction projects $r = -0.105$, $p=0.1$ was not significant at $\alpha = 0.01$ (2-tailed test). This shows a weak negative association between community participation and performance of construction projects indicating that increasing the level of community participation in construction projects results in a slight reduction in project performance. This shows that more community participation in school construction projects does not increase the projects' prospects of success. To the contrary, more community participation can lead to ineffectiveness and inefficiency in the construction projects and even increase the costs of the projects because participation comes with its costs such as meetings, communication and travel costs and have downsides such as delays, conflicts, diverse interests among others.

3.4 Regression Analysis

Linear regression analysis was done to determine the influence of community participation on the performance of construction projects. The results are shown in Table 3 and Table 4

Table 3: Regression Model for Community Participation on Performance of Construction Projects

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.105	0.011	0.007	7.0992	0.011	2.726	1	245	0.100

Note: Predictor: Community participation
n =247, $\alpha = 0.05$

In the regression model for community participation on the performance of construction projects, the value of R^2 was 0.011 meaning, community participation explains only up to 1.1% of the variations in the performance of construction projects. This shows that community participation on its own is not an important predictor of performance of construction projects. This is in line with earlier findings that community participation in primary schools in Somaliland is a fill-gap measure to fill the funding deficiency left by MoEHS in the schools due to its persistent inability to finance and provide for the schools especially in the area of school development. Schools' participate the community in more aspects than just construction projects. According to Tines (2011), community participation in primary schools in Somaliland includes school operations, mobilizing enrollment, mobilizing resources, conflict resolution, paying teachers among others. It follows that community participation in schools does not translate to community participation in construction projects, which in turn does not translate into community participation at all stages of the project cycle. Of the schools surveyed, most schools did not participate the community in project identification and project selection processes, instead, community participation started at the project planning stage.

Table 4: Regression Coefficients for Community Participation on Performance of Construction projects.

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	95.0% Confidence Interval for b		Correlations		
	B	Std. Error	Beta	t		Lower Bound	Upper Bound	Zero-order	Partial Part	
Constant	36.464	4.179		8.725	0.000	28.232	44.696			
CP	-0.187	0.133	-0.105	-1.651	0.100	-0.410	0.036	-0.105	-0.105	-0.105

Note: Dependent Variable: Performance of Construction Projects.

CP: Community participation
n =247, $\alpha = 0.05$

In the regression model of community participation on the performance of construction projects depicted in Table 4, the constant (36.464) was significant ($p < 0.001$). The b value was -0.187 indicating a low negative influence that was statistically insignificant ($p = 0.100$). This shows a weak negative relationship between community participation and performance of construction projects. Community participation in public schools in Somaliland is an education policy initiative and requirement. The policy specifies CECs as the mode of community participation. It can, however, be debated whether the participation is results-oriented in all schools or whether it is for compliance only in some schools. The resulting model is depicted as follows:

$$Y = 36.464 - 0.187 X + e \quad e = 0.133,$$

Where:

X – Community participation (independent variable)

Y - Performance of construction projects (dependent variable)

e- The disturbance term

3.5 Test of Hypothesis

The following hypothesis was tested:

H₀: Community participation (X) does not influence the performance of construction projects (Y) [$H_0: b = 0$].

H₁: Community participation (X) significantly influence the performance of construction projects (Y) [$H_A: b \neq 0$].

The results: $b = -0.187$, $p = 0.1$, CI [-0.41, 0.036] require acceptance of the null hypothesis and leads to the conclusion that community participation has no significant influence on the performance of construction projects. This is supported by the low value of R^2 for the model, of 0.011. This shows that community participation - although emphasized in public primary schools in Somaliland – is not a key determinant of the performance of construction projects in the schools.

Most of the primary schools in the study were classified as rural schools. Low social capital in rural and nomadic communities was found to have impeded completion of construction projects in schools. In such cases, community participation was effective in helping mount the projects but little community social capital capabilities had seen the projects dragging for long periods and even stalling hence a negative influence on the performance of the projects.

4. CONCLUSIONS

In the context of the study, community participation is a policy-driven intervention, whose extent of realization is dependent on the extent of the policy's implementation. Since MoEHS require community participation in school infrastructure projects, it follows thus that some primary schools participated the community in school construction projects (and by extension other school infrastructure projects) to satisfy the requirement, not necessarily for the benefits that can be gained out of such participation. Also, although most primary schools reported high levels of community participation, it does not follow that participation was high in construction projects as there are various other activities that communities are participated in, in schools such as non-construction projects, school administration, conflict resolution, school planning, resource mobilization, paying workers' salaries and enrollment mobilization among others. Not all primary schools that have community participation participate the community in school construction projects.

Since community participation is a policy-driven intervention, its extent of realization is dependent on the extent of the policy's implementation. Community participation in primary schools is a fill-gap measure of deficiencies left by the government's low and inadequate capitation to schools. Community participation in Somaliland's public primary schools is widespread and manifests mainly through CECs' but schools use other methods too. Community participation was negatively correlated with the performance of construction projects and had no significant influence on the performance of construction projects. This can be partially attributed to the fact that community participation, in this case, is a fill-gap policy-driven initiative and therefore even schools that don't value it have to engage in it. Also, the communities being participated are in most cases poor, rural and in some cases nomadic and possess little social capital. Schools in urban areas benefit more from community participation than schools in rural areas because urban communities tend to have more social capital.

The school's management – the headteacher- can single-handedly impede community participation in the schools and thereby deprive the school and the community the benefits of community participation. In the reverse, the headteacher or even one teacher can play a significant role in initiating and enhancing community participation in the school. Thus, leadership style and management practices have a determining role on whether the community will participate in the school's project, how, at what stage and in which way the participation will unfold.

5. RECOMMENDATIONS

From the study's results and conclusions, that since community participation alone is not an important determinant of the performance of construction projects in schools, MoEHS need to consider other approaches to schools development such as PPP and donor aid, among others.

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