Assessment of Budgeting Literacy Affect on Provision of Physical Resources in Public Secondary Schools in Buuri Sub-county

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Authors’ contributions
This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT
Budgeting refers to how business funds are managed effectively. Budgeting literacy is essential for proper management of school finances and hence provision of physical facilities. Thus, the current research seeks to find out the influence of budgeting literacy on physical resources in public secondary schools in Buuri Sub-County. The study was guided by institutional theory. This study was based on a descriptive research design. The study used a sample of 102 respondents comprising of 34 principals, 34 chairpersons of Parent-Teacher Association (PTA) and 34 chairpersons of Boards of Management (BOM) from 34 public secondary schools in Buuri Sub-county. The study employed two sets of questionnaires (one for principals and the other for the PTA and BOM chairpersons) as data collection instruments. Descriptive analysis was used to analyze quantitative data while thematic approach was used to analyze qualitative data. Tables and figures were used to present quantitative data while narratives were used to present qualitative data. The study concluded that literacy in various budgeting aspects like constant reviewing of the budget, needs analysis, planning, accountability, evaluation and monitoring of the budget implementation and clear school policy on management of financial resources enhances provision of physical resources in schools.
Keywords: Budgeting; descriptive analysis; buuri sub-county; and institutional theory.

1. INTRODUCTION

Planning is an important part of effective school financial management [1]. The school finance planning normally starts with the preparation of a budget [2]. Bisschoff [3] points out that a budget is the mission statement of the school expressed in monetary terms. According to McKinney (1995) the process of budgeting is a continuous and dynamic process that is characteristically manifest with regular stages, such as, needs assessment, planning, and priority setting. Budgeting process is a future-oriented process that ought to be directed by the school’s vision for the upcoming and a realistic valuation of the risks [4,1]. Bisschoff [3] points out that a budget helps in systematically planning, enumerating the objectives and recognizing priorities, to direct activities and to communicate plans within an institution, to inspire and increase the liability of middle management, approve the spending and actions, monitor, control, analyze expenditure and evaluate performance.

Budgeting is a strand that must go through every feature of any firm, in the public or private sector. Cobb-Clark, and Jha [5] suggest that this concept work easily with teachers, whose inspiration is the young people and children, education, caring and learning rather than the school budget. This opinion is correct in several ways and ought to be the motivating aspect of all school community. However, the difficult element is that there is no unlimited amount of funds for schools to use and hence the need for awareness of the budget to everyone and work collectively to make the best usage of it by attaining best worth for money. In most planning activities, the budgetary procedure follows a cyclical development that comprises forecasting (planning), implementation, evaluation and appraisal. These are not separate stages, but they interlink and feed into each other to offer ongoing financial management.

According to Levenson [6] programs and strategies that prove to be more beneficial in student learning in relation to their cost ought to be prioritized for funding during budgeting process. Budget decisions should be guided by what is advantageous to children rather than adults. In most cases, stakeholders’ interests are prioritized instead of students’ interests and this should be reversed. Roza [7] argues that where necessary the budget process ought to encourage evaluation of past spending decisions and critically change. Effective budgeting necessitates valid data on the true costs of serving learners and the outcomes generated for them. Budgeting process should be based on valid and reliable information in relation to fiscal and academic performance. The evaluation of classroom and non-classroom expenses of educating learners should take a full cost accounting approach. To consider the full cost of educating learners and available funds should be carried out during setting and reduction of budgets [6]. Acknowledgement of constraints on categorical spending during the process should be considered and all existing monies to make the most impact with the available dollars [6].

In Kenya, management of school finances is very much decentralized although the central government is involved in providing tuition fees through the Free Secondary Education (FSE) initiative. Therefore, all funds are used on the basis of the school needs as decided by the Boards of Management (BOM) through budgeting. Consequently, provision of physical facilities/resources to schools is the sole responsibility of the BOM. However, some schools lack essential physical facilities. In Buuri sub-county it has been observed that the maintenance and construction of new physical facilities is not effective. In some schools, some projects are initiated but take a long time to be completed and those which are completed are often constructed with low quality material and hence are not long lasting. It is on this basis that this study seeks to establish the influence of budgeting literacy on physical resources in public secondary schools in Buuri Sub-County.

2. STATEMENT OF THE PROBLEM

A study by Chetambe and Sakwa [8] argued that there is need to effectively manage school resources since the financial burden of educating children was ever increasing. The study found out that the financial performance of learning institutions was not being impacted on positively through in service financial training. This is in spite the fact that proper financial management is key to success of any institution. Chetambe and Sakwa [8] argued that being knowledgeable in financial management may help stakeholders to draft an innovative balanced budget, to reduce fees balances, suitable cash, debtors and creditors management in school. This ensures
reduced school arrears and gives the school ability to develop financial plans that can enable it to implement income generating activities. Thus, this is likely to impact on provision of physical facilities. However, this needs to be augmented by empirical evidence which this study seeks to provide.

With the advent of free secondary education, the provision of physical facilities was left to parental initiatives. However, some of the FSE funds are utilized in the provision of learning equipment. The parents often raise funds to maintain and build new physical facilities through paying additional fees. The funds raised are managed by the school management boards through the stewardship of the principal. However, observation of physical facilities in Buuri sub-county indicates that most schools are lagging behind in terms of essential physical facilities. This raises questions on the financial management capability of these schools. Thus, there is need to establish the influence of budgeting literacy on physical resources in schools.

3. PURPOSE OF THE STUDY

To establish how budgeting literacy affect provision of physical resources in public secondary schools in Buuri Sub-County.

4. SIGNIFICANCE OF THE STUDY

This study may be beneficial to policy makers in the Ministry of Education and the school management. The policy makers may utilize the results of this study in devising policies that can enhance schools financial management. To the school management the results of the study may help them to devise ways of improving management of school funds.

5. LIMITATION OF THE STUDY

Some respondents might were unwilling to divulge information that is pertinent to this study. The research collected data from various respondents in order to overcome this limitation. Some respondents might have also overrate some information especially about provision of physical resources. The researcher used varied types of respondents to overcome this. Some respondents might also have feared victimization. The respondents were assured of confidentiality of the data they will provide.

6. THEORETICAL LITERATURE

Institutional theory dates back in the 1970s. During this period questions were raised on why similar organizations in different geographical locations were alike or why precise practices and structures diffused to various organizational settings [9]. The common subject on institutional theory discussions is that they are concerned with normative, regulative and cognitive norms and values in firms. Meyer and Rowan [10] provided an earliest research on how institutional fields occur. Another aspect was provided by Zucker [11] who explained the basis of institutionalization such as professional associations, the organization itself or regulatory frameworks. Other researchers have concentrated on convergent processes, isomorphism and inertia [12,13]. According to Scott [14] a firm is capable of reacting to both external and internal environmental and structural changes. Zucker [11] argues that institutionalism locus is concerned with the environment and emphases on processes of imitation. Another aspect is the production of processes on the internal level of the firm. This is precisely where the course of financial management fits in. Institutional theory acknowledges the importance of internal organizational procedures and actors thus emphasizing organizational practices like budgeting.

Financial management can become implicated in order to attain the organizational legitimacy. An organization can use investments in coherent firm structures, financial management procedures and technical management to legitimize their economic and technical actions. Organization legitimacy can be improved through effective and efficient financial management within organizational environment. Accordingly, financial management and the procedures of ‘best management’ therefore turn into symbols of the organization’s obligation to external values like the demands for better ‘efficiency’, ‘accountability’, ‘effectiveness’ both as a goal and as a strategy of rational management and governance. The reaction of schools to utilize school finances in the provision of physical facilities can be understood as a way of maintaining standardized, legitimate, and formal structures though their actions differ in relation to practical deliberations. Though, this can only be achieved through sound budgeting, debt management and record keeping skills. This may also be attached on the cash flow management
in the organization to balance the expenditure of funds.

7. EMPIRICAL LITERATURE

Budget policies simplify and develop the intention behind how the school will utilize its financial resources [15]. While schools ought to always conform with applicable laws and regulations, laws and regulations cannot provide acceptable guidance for the school leadership to work collectively and optimally to attain the school’s objectives [6]. Policies create homegrown standards that are suitable and intolerable courses of financial act, factors that the school can operate, and a standard against which the school’s fiscal performance can be refereed. Schools should create policies that boost maintenance and replacement of facilities and other assets like technology, textbooks and buses [15]. The policy need to provide a direction on how all assets will be maintained at a level in which that capital investment is protected and reduce future maintenance and replacement expenditures. The policy need also to require the school to maintain an inventory of its replacement/maintenance requirements and define the funding tools for remaining current with those requirement.

Cobb-Clark and Jha [5] carried out a study on the educational attainment and the distribution of financial resources in Victorian government schools. The study showed that there was a lack of firsthand evidence that linked expenditure decisions to educational achievement at either the student or the school level. The study indicated it seemed that the independent decisions of school leaders have resulted in a resource distribution that is generally efficient. The study also noted that per-pupil spending has a modest relation with enhancement in students’ NAPLAN test scores. The study however did not explain the effect of budgeting on provision of physical resources in schools. Thus, the current study seeks to establish the effect of budgeting literacy on provision of physical resources in public secondary schools.

8. CONCEPTUAL FRAMEWORK

The conceptual framework shows the relationship between independent variables which are budgeting, record keeping, debt management and cash flow management literacy. Availability and maintenance of physical facilities such as school buildings, furniture and learning equipments ensures that students learn in a good environment. Without the right physical facilities in a school, learning may be impaired and hence hamper academic performance of students. Based on human capital theory which explains the connection between education and economic production, an individual who joins secondary school is likely to be more economically salient than one who quits school at primary school level. Failure to provide sufficient physical facilities through good finance management practices may result in inability of students in such schools to realize their economic salience. Thus, the government investment in free basic education could just go to drain without empowering the community economically.

<table>
<thead>
<tr>
<th>Budgeting literacy</th>
<th>Provision of physical facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Budget planning</td>
<td>- School buildings</td>
</tr>
<tr>
<td>- Budget needs assessment</td>
<td>- Furniture</td>
</tr>
<tr>
<td>- Priority setting</td>
<td>- Learning equipment</td>
</tr>
<tr>
<td>- Budget implementation</td>
<td></td>
</tr>
<tr>
<td>- Budget evaluation and review</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1. Conceptual framework
9. RESEARCH GAPS

Odden and Picus [15] argue that budget policies clarify and crystalize the intent behind how the school will manage its financial resources. Odden and Picus [15] further assert that school budget policies should govern maintenance and replacement for its facilities as well as its shorter-lived assets such as buses, textbooks, and technology. A study by Cobb-Clark and Jha [5] reported that there is a lack of empirical evidence that links spending decisions to educational outcomes at either the school or the student level. The study however did not clarify the effect of budgeting on provision of physical resources in schools. Thus, the current study seeks to establish the effect of budgeting literacy on provision of physical resources in public secondary schools.

10. RESEARCH DESIGN

Descriptive research design was used in this study. According to Borg & Gall [16] descriptive research produces statistical data related to aspects of education that are of interest to policy makers and educators. Since this study did not involve manipulation of data, it fits the confines of descriptive research design. This design was used because the study is out to gather information already existing among the population under study.

11. LOCATION OF THE STUDY

The study was carried out in public secondary schools in Buuri Sub-county, Meru County Kenya. The location was selected because it was reachable to the researcher. The sub-county was also targeted because it had been observed that schools had dilapidated physical facilities and initiatives to construct new facilities often take long to be completed.

12. TARGET POPULATION

Target population refers to items or people under contemplation in any field of inquiry [17]. This study targets 34 principals, 34 chairpersons of PTA and 34 chairpersons of BOM in public secondary schools in Buuri Sub-county, Meru County Kenya. Thus a total of 102 respondents were targeted as shown in Table 1 below.

<table>
<thead>
<tr>
<th>Table 1. Target population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respondent</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Principals</td>
</tr>
<tr>
<td>PTA chairpersons</td>
</tr>
<tr>
<td>BOM chairperson</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

13. SAMPLING PROCEDURES AND SAMPLE SIZE

A sample refers to a small portion of a target population. Sampling refers to picking a specified number of respondents from a given population as demonstrative of the whole population [17]. Any argument made about the sample ought to also be factual of the population (Orodho, 2002). However, it is agreed that the bigger the sample, the minor the sampling inaccuracy.

Since the target population is small purposive sampling was used and hence all the target population were involved in the study. The principals, chairpersons of PTA and chairpersons of BOM were purposively sampled.

14. RESEARCH INSTRUMENTS

The study employed two sets of questionnaires (one for principals and the other for the PTA and BOM chairpersons) as data collection instruments. The questionnaires had five sections. Section “A” collected background information of the respondents. Section “B” had items on the influence of budgeting literacy on provision of physical facilities. Section “C” had items on the influence of record keeping literacy on provision of physical facilities. Section “D” had items on the influence of debt management literacy on provision of physical facilities. Section “E” had items on the influence of cash flow management on provision of physical facilities.

15. DATA ANALYSIS AND DATA PRESENTATION

Data collection was followed by coding and categorization of data using the Statistical Package for Social Sciences (SPSS) Version 20.0. Quantitative data was analyzed using descriptive statistics such as frequencies, percentages, means and standard deviations. Frequency tables, graphs and pie charts were used to present the quantitative data. Qualitative data was analyzed using thematic approach. Qualitative analysis organizes and describes data in rich detail. It interprets various
aspects of the research topic (Broun & Clarke, 2006). The researcher familiarized with the data, generate initial codes, search for themes (based on research questions), review the themes, define and rename the themes, and then produce the report. The researcher identified, and analyzed each theme at a time across the data collection instruments (questionnaires and interview schedules).

16. DATA ANALYSIS

Effect of Budgeting Literacy on Provision of Physical Resources

The objective of the study sought to establish how budgeting literacy affect provision of physical resources in public secondary schools in Buuri Sub-County. The respondents were requested to respond to various statements related to effect of budgeting literacy on provision of physical resources. The results are summarized in Table 2 (P=principal, PBC= PTA/BOM chairperson, SD= Strongly disagree, D = disagree, U- undecided, A = agree and SA = strongly agree).

The results in table above indicates that majority of the respondents agreed with the statement that each annual school budget quantifies and identify priority physical resources to be provided within the year with a mean 3.83 and standard deviation of 0.706 indicating that the responses were clustered around the mean. This was closely followed by the statement that school budget is usually guided by the school vision with a Mean 3.78 and a standard deviation of 0.900. This was followed by the statements: the school budget helps in coordinating and communicating physical resources to be provided within a specific year (M = 3.59, SD = 0.886), budgeting in my school is an ongoing process throughout the year (M = 3.56, SD = 0.776) and Most physical facilities have been provided through sound planning during the budgeting process (M = 3.50, SD = 1.288). However majority of the respondents were undecided on the statement that budgeting in a school is a static process that only takes place at the beginning of the year with (M = 3.27,SD = 0.758). The strong findings of the study concurred with Preez et al. 2003 that the process of budgeting is a continuous and dynamic process that is characteristically manifest with regular stages, such as, needs assessment, planning, and priority setting. Budgeting process is a future-oriented process that ought to be directed by the school’s vision for the upcoming and a realistic valuation of the risks.

<table>
<thead>
<tr>
<th>Opinion statements</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid N (list wise)</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budgeting in my school is an ongoing process throughout the year</td>
<td>86</td>
<td>3.56</td>
<td>.084</td>
<td>.776</td>
</tr>
<tr>
<td>Budgeting in my school is a static process that only takes place at the beginning of the year</td>
<td>86</td>
<td>3.27</td>
<td>.082</td>
<td>.758</td>
</tr>
<tr>
<td>My school budget is usually guided by the school vision</td>
<td>86</td>
<td>3.78</td>
<td>.097</td>
<td>.900</td>
</tr>
<tr>
<td>Most physical facilities have been provided through sound planning during the budgeting process</td>
<td>86</td>
<td>3.50</td>
<td>.122</td>
<td>1.135</td>
</tr>
<tr>
<td>Each annual school budget quantifies and identify priority physical resources to be provided within the year</td>
<td>86</td>
<td>3.83</td>
<td>.076</td>
<td>.706</td>
</tr>
<tr>
<td>The school budget helps in coordinating and communicating physical resources to be provided within a specific year</td>
<td>86</td>
<td>3.59</td>
<td>.096</td>
<td>.886</td>
</tr>
</tbody>
</table>

Table 2. Effect of budgeting literacy on provision of physical resources
17. REGRESSION ANALYSIS OF BUDGETING LITERACY AGAINST PROVISION OF PHYSICAL RESOURCES

For the purpose of determining the importance of the association between budgeting literacy and the supply of physical resources, regression analysis was performed. Table below displays the findings of an Analysis of Variance (ANOVA) conducted on budgeting literacy vs. the supply of physical resources. According to the ANOVA findings for regression coefficients, the significance of the F is 0.000 less than 0.05, indicating that the predictor coefficient is at least not equal to zero. This also implies that the model and the subject are a good fit.

Also taken into consideration were the beta coefficients of budgeting literacy vs. the availability of physical resources. According to Table below, the correlation between budgeting literacy and income is 0.921. Its t statistic is 0.2337 and its p-value is 0.000, which is less than 0.05, making it a significant coefficient. This p value, which indicates the relevance of the coefficient of budgeting literacy, is confirmed at a confidence level of 95 percent. As a result, we can infer that budgeting literacy is influencing provision of physical resources and therefore has a significant positive relationship.

### Table 3. ANOVA budgeting literacy

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>61.019</td>
<td>1</td>
<td>61.019</td>
<td>561.390</td>
<td>.000&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>1.296</td>
<td>222</td>
<td>.1.087</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>62.315</td>
<td>223</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: provision of physical resources  
<sup>b</sup> Predictors: (Constant), budgeting literacy

### Table 4. Coefficients budgeting literacy

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>2.906</td>
<td>.197</td>
<td></td>
<td></td>
</tr>
<tr>
<td>budgeting literacy</td>
<td>.921</td>
<td>.065</td>
<td>.016</td>
<td>.237</td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: provision of physical resources

18. SUMMARY

The first objective sought to establish the effect of budgeting literacy on provision of physical resources. It was established that all the schools sampled have a dynamic budget preparation process with a level of agreement with M = 3.56 and SD = 0.776. This dynamic budget allows for adjustment throughout the year which could allow for provision of essential physical resources without interfering with the learning process in schools. The findings further revealed each annual school budget quantifies and identify priority physical resources to be provided within the year (M=3.83, SD = 0.706). Majority of the respondents sampled revealed that the school budget is usually guided by the school vision (M=3.78, SD=0.900) this provides a road map to attaining school vision. The study findings agreed on most physical facilities have been provided through sound planning during the budgeting process (M = 3.50, SD = 1.288). However majority of the respondents were undecided on the statement that budgeting in a school is a static process that only takes place at the beginning of the year with (M = 3.27,SD = 0.758). When it comes to provision of physical resources in public secondary schools in Buuri Sub County, budgeting literacy has a statistically significant impact, as evidenced by a correlation coefficient (t statistic) of 0.2377 and a probability (p-value) of 0.000, both of which are significantly less than 0.05. This p value, which indicates the relevance of the coefficient of budgeting literacy, is confirmed at a confidence level of 95 percent.
19. CONCLUSIONS

Based on the study findings the following conclusion was made:

Literacy in various budgeting aspects like constant reviewing of the budget, needs analysis, planning, accountability, evaluation and monitoring of the budget implementation and clear school policy on management of financial resources enhances provision of physical resources in schools.

20. RECOMMENDATIONS

Based on the study findings the following recommendation was made:

School management personnel should be trained in budgeting process to ensure implementation of better budgeting process and enhancement of physical resource provision

SUGGESTIONS FOR FURTHER STUDIES

A study should be carried out on:

The effect of financial management training on budgeting process in schools

The influence of record keeping on financial accountability in schools

The influence financial management training on cash flow management in schools

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES


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