EFFECTS OF STAKEHOLDERS ENGAGEMENT ON THE IMPLEMENTATION OF PHYSICAL INFRASTRUCTURE PROJECTS IN PUBLIC SECONDARY SCHOOLS: A CASE OF WEST POKOT AND TRANS NZOIA COUNTIES, KENYA

ABSTRACT

Education sector globally has realized a huge rise in enrolment levels. In Kenya for instance, the continuous enrolment in primary schools and the hundred percent transitions as a result of the Free Primary Education (FPE) has imposed pressure on the already existing resources in Secondary section. This study aimed at assessing the effects of stakeholder engagement on implementation of physical infrastructure projects in secondary schools: a case of West Pokot and Trans Nzoia Counties, Kenya. The study adopted Critical Chain Project Management theory. This study employed a descriptive survey design which was suitable since the study sought to collect information from the respondents on their opinions. The target population was 479 which comprised of the Principals, Board of Management Members, County and Sub County Directors of Education. Using Yamane's formula, a sample size of 218 respondents was attained. Questionnaires and interview guides were used in data collection. The quantitative data collected was coded to translate questions responses to specific categories and analyzed using the Statistical Package for Social Sciences (SPSS), tabulated and presented using descriptive statistics. The findings indicated that in both Counties; stakeholders were highly engaged in secondary school infrastructure project development though at varied levels. The findings showed that indeed, school heads are being supported and trained by the Ministry of Education (MoE) in both counties on the capacity to handle projects. The study also found out that whereas the board of management in Trans Nzoia County was offering some good work in managing projects, the management in West Pokot County was ineffective. There was an indication that; despite the government banning the PTA component of financing schools, still schools in Trans Nzoia county charge parents this component in the fees as opposed to the West Pokot schools. It was also evident from the findings that teachers were not engaged in the development of the physical infrastructure in the two counties. The findings showed that in counties, professionalism and commitment from the contractors were upheld. The respondents in the research rated PTA's participation in terms of expertise and financial support to having influence in school infrastructure project implementation in Trans Nzoia County. Respondents from both Counties agreed that there was commitment and professionalism from the hired contractors. The following recommendations were made: Participation by stakeholders in the whole process of infrastructure project implementation in government aided secondary schools should be encouraged. Given that the government banned PTA component of physical infrastructure funding, the government should provide enough budgetary funding to all secondary schools. The study recommends that teachers ought to be engaged in physical infrastructure development in secondary schools. The study also recommends that Parents Teacher Associations need to be empowered on project implementation in schools and due diligence should be followed in pre-qualifying, selecting and awarding of tenders to contractors.

KEY WORDS:

Education sector; Stakeholders involvement; Physical infrastructure; Secondary Schools.

INTRODUCTION

Several studies have been contacted throughout the globe in an attempt of looking into the completion rates of physical infrastructure projects across many sectors. In Virginia USA for instance, school boards and local divisions are entrusted with the task of developing Educational infrastructure and determine the type and spaces needed for each school project (Virginia Department of Education, 2010).

In Africa, the education stakeholders have worked closely in supporting the development of basic education through construction of: classroom, laboratories, library, dormitories and installation of electricity and ICT facility. According to Chimombo (2005), there has been massive expansion in the provision of educational facilities and opportunities. There has also been varied stake holders participation and infusion of large sums of money by the new governments who believe that advancement of education is a political necessity.

The Kenya government infrastructural policy which is geared to achieve Universal Primary Education (UPE) emphasizes the need for infrastructural development to accommodate the increased enrolment in schools. The Kenya Education Sector Report, 2013/2014 to 2015/2016 period noted that, the sector priority areas of expenditure will include construction and improvement of infrastructure in learning institutions at all levels. This is an indication of how infrastructural projects are of importance to the education sector in the country.

Kyambalesa (2010) observed that great pressure has been put on the existing school infrastructure due to the strategy initiated and introduced in 2003 regarding setting off any levies at primary level, making basic education free in Kenya. The rapid enrolment in schools has resulted to overcrowding in the available facilities and resources in schools and poor conditions that are generally not learner-friendly in school environments.

Onchiri (2015) asserted that each individual secondary school should aim at providing quality education to learners. This is made possible through provision of suitable physical infrastructure, committed personnel and teachers, modernized resources and learner friendly environment visa vis; enough time between the learners and the teachers, the accessibility of such school, healthy and good water source, housing for instructors within the school compound, essential physical facilities for the learners such as; playground, toilets, libraries, computer labs, dining halls and enough classrooms**.**

In Kenya, education projects like laboratories construction, the Kenya school Equipment Scheme, class room construction, information communication technology, dining halls construction, water supply, among other projects have either been executed amid difficulties or worse never went beyond paperwork step. Their failure to be completed shortly before or after implementation, speaks volumes of project profligacy that though widely talked of, have not been documented. Success in project completion thus will depend mainly on good management and organization and close alignment between projects particular requirements and facilities provided at the local level (Ndagi, 2013). Many projects fail due to mismanagement and lack of proper coordination amongst various stakeholders, specifically at secondary school level. In order to examine the effects of stakeholders engagements on the implementation of physical infrastructure in secondary schools, the researcher focussed on the following objectives;

1. To determine the effect of stakeholder involvement on the implementation of physical infrastructure projects in secondary schools.
2. To establish the stakeholders sources of funding on implementation of physical infrastructure projects in secondary schools.
3. To find out the level of teachers participation in implementation of secondary school infrastructure projects.

THEORETICAL FRAMEWORK

The study was based on the Critical Chain Project Management (CCPM) theory by Eliyahu and Goldratt (1997).

The Critical Chain Project Management is a technique of putting up tasks which emphasizes availability of resources in the execution of project work. The emphasis here lies on the human resources and materials needed in the implementation of the project. This applies Constraints theory to the projects implementation. The main objective is to enhance the rates of projects completion. On project management, Stratton (2009) opined that the critical chain means the order of progression of obstacle which hinders projects from being completed as scheduled. The theoretical approach applied by the study seeks to find out the constraints encountered by the

heads of learning institutions in managing projects as well as the availability of resources to them for better implementation of school projects. Every project manager should be driven by the ability to have the complex tasks of the project completed as planned while maintaining the estimated cost as well as noting and writing accurate reports of the projects. The managers of learning institutions must ensure that crucial and essential resources are availed when needed so as to ensure timely completion rates of physical infrastructure projects within the schools.

LITERATURE REVIEW

The stakeholder involvement has been considered and given priority by the Bolivian government as they have incorporated community participation into the secondary school system. Parents have not necessarily been tasked with financial element but setting up of physical infrastructure, close monitoring and ensuring their participation in other school functions (World Bank, 2012).

In Cambodia, constructing and renovating of school facilities has been left in the hands of teachers and parents. It is the role of Parents Teachers Association to ensure that their school going children enrol to learning institutions and making follow up to curb down any drop out. The education system in Cambodia has categorised secondary schools to 6-9 for smooth administration. Its core objective was for the schools to enjoy the advantages in terms of instructional materials, human resource available and structures present. The committee formed from cluster committee join together to form construction team whose aim is to solicit funds, labour and land where setting up of schools is to be done. They are tasked with deciding whether construction will be through community skill or contracted. The formed committee under whatever circumstances is tasked with overseeing the progress of any project. Approximately 15% of the total expenditure, inclusive of land is the effort and donation of the citizens, (Dykstra & Kucita, 2003).

In Ghana, the government through the ministry of education has engaged community participation in construction activities, especially in public secondary schools facilities, to boost and improve the development of the society. The government of Ghana came up with a system where community grants were matched ready to facilitate development of school physical projects. The government shares the cost of the project with the community in the ratio; 2:3-1:3, where the Ghanaian government incurs the largest fraction in phases while the community incurs a third of the total cost of the project. Community participation basically goes to laying

foundation of the project as the government support completes the rest of the costs in phases. This has been observed to give community project ownership, (World Bank, 2014).

The high rise of student enrolment in Kenya in both secondary and primary schools in the recent years, coupled with inadequate resources, has put management of school project on the spot as it has become more complex than few past few years. For effective and more successful implementation of school physical infrastructure, school management needs to engage people from within and outside the school. These can be sorted from the students, teaching and non-teaching staff and the larger community. Wamunyu (2010), argues that decision making, project management and implementation require the support of these category as these involvement will in support of head of institution regarding school projects.

Top project managers have the responsibility of knowing the expectations of every project while identifying the responsible stakeholders. Every stakeholder needs to get clear and correct communication for better and proper success of school physical projects. Stakeholders are those individuals involved in the project implementation process, making it to either succeed or fail. The Project Management Book of Knowledge is of the view that; stakeholders are organizations or persons, for instance, sponsors, customers, public or organizations undertaking active participation in a project with their influence failing it or making it a success (Project Management Institute, 2018).

A healthy relationship in project management and implementation process is developed through identifying as well as knowing who the stakeholders are. As a manager, it's of great importance to note that stakeholders take part in decision making from initial stage to the end of the project. As demanded by the project goal, the ability of the stakeholders to understand projects scope and the process should be carefully considered (World Bank, 2013).

Further still, World Bank (2013) goes on to indicate that stakeholders can be categorised into five types as; project manager, project team, sponsors, customers and a functional manager. Stakeholders are structured to classify them into external and internal. Those individuals for instance the managers' fall under the internal stakeholders since the project affects them directly. Sponsors, final users, managers' form this group. External stakeholders on the other hand are those who are only interested on the outcome of the project. Examples include vender and suppliers (Wami, 2012).

According to Corporate Greek (2010), the sponsors of a project should be responsible in ensuring that project stages are followed as planned. They are tasked with conducting meetings regularly to keep the timelines and making any necessary adjustment where possible. Allocating and provision of any kind of resources to support the project implementation lies in the docket of the sponsors. They need to have a broader understanding of the projects scope and resource requirement. Close sponsors engagement helps in estimating the costs overrun as well as sourcing other possible alternatives to meet the budget (United Nations, 2010).

Secondary stakeholders accelerate completion of projects through administrative and legal matters though their role in not paramount as that of primary stakeholders. Proper communication between all the types of stakeholders enhances project management and put every individual in line to the set target. Distorted communication results to breakdown and eventually failure of project. Top project managers are categorised as internal stakeholders since their involvement is key and determines its failure or success. Involvement in this case means the process of taking part in something. Their role involves coordinating, managing, monitoring as well as evaluating phases of the project processes. Suppliers and vendors play the role of providing the required elements for the development of the projects and as such, correct mode of communication should be put in place to enhance smooth implementation of infrastructural facility, (UNDP, 2012). Freeman et al. (2017) opine that traditional approaches management implies active planning for the stakeholders through consideration of communication modes and different ways which assist to put up and control the relationships of stakeholders. Freeman further asserts that stakeholders' relationships can be strengthened by use of different techniques. Such techniques include; assessment of stakeholder, making behavioural analysis, knowing stakeholder strategies, creating and developing new ways of interacting with them.

The traditional project approaches of management are characterized by their well-organized systematic stages of development. They emphasize on the significance of predetermined requirements in stakeholders more so at the initial stage. The Project Management Institute (PMI) states that traditional project management has five processes that include; initiating, planning, executing, monitoring and controlling and the closing stage (Project Management Institute, 2018).

In traditional project management, stakeholders too share the predetermined and the well planned character. The steps as proposed by Project Management Institute (2018) include; collecting and identifying information by assessing major requirements, expectations or interests and categorizing them into groups. Setting stakeholder management strategies explain the way to increase the support and reduce the adverse effect of the stakeholders throughout the stages of the project span. The idea of planning stakeholder communication procedures which is the process of determining projects stakeholder information stipulates the communication approach employed in the system.

Omolo (2015), in a study on the factors influencing project management and implementation in public aided projects in Kenya, indicated that majority of the projects in Nairobi City County do not engage stakeholders in public participation at whichever stage. The study concluded that stakeholder participation has a significant effect on the implementation of project and management, the necessary skills play important role of duties execution by the project employees.

Njoki (2013) noted that planning process involving participation both at local and government levels takes place where the implementation takes place. Njoki further noted that participatory activities should be located to remove the bureaucratic processes which are traditional in nature including information collected and written.

METHODOLOGY

According to Bryman and Bell (2015) a research design is a strategy for data collection and analysis to generate answers to the research problem. It is the glue that binds the elements of research together. This study employed a descriptive survey design. The design was suitable for this study on the grounds that the study sought to collect information from the respondents on their opinions and believes. The target population was a cross section of education stakeholders within the learning institutions who assisted the researcher to understand the study problem. The study population comprised of 479 respondents drawn from the two counties. A sample is a small proportion of a population selected for observation and analysis. The sampling procedure is the process of selecting the sample or the subset from which the study was done (Kothari and Gaurav, 2014). The study adopted cluster sampling technique. The clusters in this study comprised of Principals, Board of Management, and Sub-County Directors of Education and

County Directors of Education. The sample size arrived at was calculated using Taro Yamane's formula (Yamane 1967)

$$n=N/1+Ne^2$$

Where: **n**= the sample size

N= the size of population (479)

e= the error of 0.05 percentage points

Therefore; n= 479/1+479(0.05*0.05)

=218

The sample size therefore, was 218 respondents who were distributed as illustrated in the table 1 that follows.

Table 1: Sampling Frame

Category	**Sampling Technique**	**Study population**	**Sample size**
Principals	Purposive	63	63
Board of Management	Simple random	407	146
Sub County Directors	Purposive	7	7
County Director	Purposive	2	2
Total		**479**	**218**

From table 1: purposive sampling technique was used to select the sample for Principals; hence all the principals of the 63 targeted schools were respondents. The 63 schools were shared equally by the 7 sub-counties. Purposive sampling too was used to select the 7 Sub County Directors and 2 County Directors of Education form the two Counties, hence, all the 9 Sub County and 2 County Directors of Education were selected. Simple random sampling was used to select 146 BOM members. The BOM members were shared in the ration of the number of schools in the counties. Particularly, each of the 63 selected schools was represented by two BOM members.

Data was collected using the questionnaires. The questionnaires were administered by the researcher and the assistants upon getting authority from Kisii University to collect data. After being granted permission by the authorities of various institutions, questionnaires were administered by the researcher and the assistants after arrangements with area sub chiefs' curriculum support officers. Quantitative data gathered from closed ended questions was post-coded, entered and analyzed using the Statistical Package for Social Sciences (SPSS version 22.0); tabulated and presented using descriptive statistics. To integrate qualitative data gathered from open ended questions, tallying of similar responses of each item was done. Results of data gathered from closed ended, open ended items as well as data obtained from interview guide by the researcher was presented in frequency tables, percentages, means, tabulations and graphs and explanation of the findings made based on themes.

FINDINGS

This study sought to establish the degree of the stakeholder involvement influence on implementation of physical infrastructure projects in public day secondary schools. Through the administered questionnaires, the respondents were asked to kindly indicate their level of agreement using a five point Likert scale; 5 = strongly agree,4 = agree,3 = uncertain,2 = disagree and 1 = strongly disagree in order to specify their perceptions on the six areas of stakeholders participation in the areas of; Ministry of Education (MoE) training support offered to the Principals, the Board of Management (BOM) support in terms of management and leadership, Parents Teachers Association (PTA) participation in terms of expertise and financial support, teachers participation in implementation of school infrastructure projects, the contractors commitment and professionalism, the support and involvement of school alumni and associations.

Table 1: Extent of influence of stake holder's involvement in secondary school project implementation in West Pokot and Trans Nzoia Counties

Statement	**Trans Nzoia County**									
	1		**2**		**3**		**4**		**5**	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Support and training offered by Ministry of Education to school principals	16	15.8	42	40.1	22	21.3	13	12.4	11	10.4
Managerial and leadership of	20	18.8	40	38.1	5	4.5	18	17.3	22	21.3

school Board of Management										
Participation of PTA's in terms of expertise and financial support	35	33.7	41	39.1	9	8.9	7	6.4	12	11.9
Teachers participation in the implementation of school infrastructure projects	18	17.3	17	16.8	8	7.9	34	32.7	26	25.2
Contractors commitment and professionalism	25	23.8	40	38.1	24	23.3	8	7.4	8	7.4
Statement	**West Pokot County**									
Ministry of Education training and support offered to the principals	9	9.4	46	46.5	6	5.9	22	22.3	15	15.8
Board of Management leadership and management	19	19.3	23	23.8	9	8.9	26	26.7	21	21.3
PTA's expertise and financial support	5	5.0	41	42.1	7	6.9	33	33.2	13	12.9
Teachers participation in implementation of school infrastructure projects	7	6.9	26	26.2	15	15.8	12	12.4	38	38.6
Contractors commitment and professionalism	33	33.7	37	38.1	13	13.4	5	5.4	9	9.4

Source: Authors computation from survey data (2020)

The findings showed that majority of respondents in Trans Nzoia County 42 (40.1%) agreed and 16 (15.8%) strongly agreed that support and trainings were provided by the Ministry of Education to school principals, while 13 (12.4%) and 11 (10.4%) of the respondents disagreed and strongly disagreed respectively to the same. On the other hand, 46 (46.5%) and 9 (9.4%) agreed and strongly agreed respectively while 22 (22.3%) and 15 (15.8%) disagreed and strongly disagreed to the same in West Pokot County.

On Managerial and Leadership of School BOM, 40 (38.1%) and 20 (18.8%) of the respondents in Trans Nzoia County agreed and strongly agreed to the leadership of the board of management while 18 (17.3%) and 22 (21.3%) respectively disagreed and strongly disagreed. In West Pokot County, majority of the respondents 26(26.7%) and 21 (21.3%) disagreed and strongly disagreed to board of management offering quality leadership while 23 (23.8%) and 19 (19.3%) agreed and strongly agreed to the same. This was manifestation that; whereas the board of management in Trans Nzoia County was offering good work in managing projects, the board of management in West Pokot County offered wanting work.

Question three in objective two wanted to find out the PTA's participation in terms of expertise and financial support in school physical infrastructure development. The results showed that the majority of respondents from Trans Nzoia County 41 (39.1%) and 35 (33.7%) agreed and strongly agreed to there being financial support respectively while, majority of the respondents in West Pokot county 33 (33.2%) and 13 (12.9%) disagreeing and strongly disagreeing respectively to there being financial support from the parents teachers associations. This was an indication that; despite the government banning the PTA components of financial Support in schools, still schools in Trans Nzoia county charge parents this component in the fees as opposed to the West Pokot schools.

On teachers participation in the process of implementing school infrastructure projects, majority of respondents in Trans Nzoia county 34 (32.7%) and 26 (25.2%) strongly disagreed and disagreed to teachers being involved in implementation of physical projects in the county respectively while, equally majority of the respondents in West Pokot county, 38 (38.6%) and 12 (12.4%) strongly disagreed and disagreed to the same. It was evident from the finding therefore those teachers were not as such engaged in the development of the physical infrastructure in the two counties.

The last question in objective two wanted to find out the extent to which the professionalism and commitment of contractors is upheld in schools in the two counties. The findings indicated that in Trans Nzoia County, 40 (38.1%) and 25 (23.8%) agreed and strongly agreed respectively there being professionalism and commitment from contractors as opposed to 37 (38.1%) and 33 (33.7%) agreed and strongly agreed respectively to the same in West Pokot County. This indicated that in both Counties professionalism and commitment from the contractors was upheld.

The respondents rated managerial and the capacity of school BOM leadership to be influential in implementation of school infrastructure projects at an agreement level in the two Counties. The respondents in this research rated PTA's participation in terms of financial support and expertise as being influential in implementation of school infrastructure projects in Trans Nzoia County and an indication that still parents in Trans Nzoia County were being charged with levies toward physical development as opposed to West Pokot County.

The commitment and professionalism of the hired contractors was well rated in the two Counties to be influential in management and implementation of school physical infrastructure projects. The teachers' participation in infrastructure projects implementation as well as the involvement of the school alumni associations was observed to have minimal effect at a very low level of agreement in both Counties. There was a general agreement in both counties that there was commitment and professionalism from the hired contractors given that the agreement levels were high in the both responses.

The interview with the education directors sought to establish whether other stakeholders were involved in the implementation of school infrastructure projects. In their responses, all of them were in the affirmative that indeed other stakeholders were involved only that the level of involved varied from one county to another. The majority of directors from West Pokot County were more in agreement that stakeholders are very actively involved in school development as opposed to Trans Nzoia County.

These research findings concurred with the findings made by Bright (2010) whose study noted that project managers need to identify stakeholders of the project and determine their needs and projects expectation. He further states that an effective communication between stakeholders will ensure the project is successful and that everyone is on track. This further conforms to the World Bank (2013) whose opinion was that knowing your stakeholders is of great importance and the processes starts with creation of good and healthy relationships. They assist in deciding on the issues from the start, during panning and at the stage of project execution. Stakeholders should therefore understand how the project functions, the milestones, scope and the goals. Polit & Beck, (2019) and Apolot, Alinaitwe and Tindiwensi, (2010) who argued that the institutional managers should have candidate to plan for important managing sponsors, stakeholders and constituents to mitigate project derailment. In case of any arising challenges, top management is in the best position to help the project team to handle them with ease. UNDP, (2012) argues that communication between primary and secondary categories of stakeholders will make sure that everybody is working towards the set goal. In the event of lack of communication, the project plans and stages will realise a breakdown. Being essential internal stakeholder who directly plan and carryout monitoring and evaluation, they are entrusted with the authority to manage and handling the responsibility of work performance, planning as well as organizing. They ensure all stages of the project are done efficiently and effectively. The study agree with study findings of

Ashaye (2010) who opined that the role of top management is usually in terms of; providing the required resources for completion processes to its success, sharing of responsibilities with the team involved in the project, making effective communication with all the concerned authorities of the team as well as offering support in times of crisis or even during the unexpected situation. He further argues that many successful project managers should emphasis on the usefulness of carrying out investigations all the processes involved apart from detailed and proper planning, appropriate financial and human resource allocation.

The study is in line with findings by Corporate Geek (2010) who states that the sponsors of a project are accountable for ensuring that project stages are in line with time schedules. They have to convene frequent meetings to check on the timelines, sort and address any arising challenges and making sure that the managers of the planned project remains focussed on the objectives. The responsibility of allocating and supplying resources and finances to the project is in the hands of sponsors. The UN (2010) states that sponsors needs to have a clear understanding of the projects outcome and expectations based on; the resources, scope and schedules.

CONCLUSION

Based the findings, the study concluded that stakeholders participation influences infrastructure project implementation in public day secondary schools in both West Pokot and Trans Nzoia Counties. However, boards of managements in West Pokot County were doing little work than expected compared to their counterparts in Trans Nzoia County. The study concludes that teachers are hardly involved on matters of physical infrastructure development. On the last question regarding contractors; the study concludes that there was high level of professionalism and commitment embraced by contractors while implementing projects.

RECOMMENDATIONS

From the findings, participation by the stakeholders in the whole process of infrastructure project implementation in government aided day secondary schools should be encouraged. This participation should begin from the time of project designing until the final stages of completion.

The study recommends that the government should provide enough budgetary to all public day secondary schools to cope with pressure from hundred percent transitions from primary.

The study recommends that teachers ought to be involved in one or another in physical infrastructure development in secondary schools since currently, they are less involved.

The study also recommends that parents teacher associations need to be empowered as they have a direct influence on project implementation in schools.

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