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The Influence of Level of Funding on Implementation of Physical Infrastructure Projects in Public Secondary Schools

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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

The free primary education and subsidized secondary levels resulted to high enrolment in secondary schools in Kenya. This led to congestion on the existing facilities, especially in government aided secondary schools hence creating the need to construct more relevant physical facilities. However, in many government aided secondary schools, there are examples of faulty project implementation in terms of; incomplete buildings, inadequate instructional materials in some schools, poorly developed play grounds, laboratories with inadequate equipment, congested class rooms and lack of departmental offices. This study therefore aimed at establishing the influence of level of funding on physical infrastructure implementation: a case of Trans-Nzoia and West Pokot Counties, Kenya. The study adopted the Critical Chain Project Management theory while the descriptive survey design was employed. The target population comprised of the principals, the Board of Management (BOM) members, Sub County and County Directors of Education. Questionnaires and interview guides were used in data collection. The validity and reliability of the tools was done by use of the expert's opinions and a test re-tests technique respectively. The quantitative data was analyzed with the aid of the Statistical Package for Social Sciences (SPSS) and presented by using descriptive statistics. Qualitative data was organized thematically and

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analyzed alongside the corresponding quantitative data. The findings revealed that; West Pokot County government allocated more funds towards infrastructure compared to Trans Nzoia. There was more donor support in West Pokot County than Trans Nzoia. Allocation and disbursement of funds from the ministry of Education and Constituency Development Funds delayed. As a result, schools in Trans Nzoia charged parents fees for infrastructure development. Allocation and disbursement of Funds from the ministry of education and the Constituency Development Funds delayed. The study recommended that there is need for more capacity building on outsourcing of resources to help implement projects in secondary schools in the two Counties. The findings from the study would be helpful to policy makers in developing informed policy in financing and implementation in education sector.

Keywords: Education; infrastructure; funding; projects; implementation; policies.

1. INTRODUCTION

It has been accepted globally that Education is an important tool that propels other sectors of the economy to realize economic growth and development. Many Countries around the globe fund basic levels from primary to secondary so as to achieve the Millennium Development Goals (M.D.G). A significant rise in funding is required for every Nation to attain the dream of MDG's.

There are notable studies undertaken that look into the rates of project infrastructure project completion across various sectors, such as; Education.

In Virginia USA for instance, school boards and the local school divisions are tasked with initiating and developing infrastructure for learning institutions. They are also responsible in designing as well as determining the specification, types and the number of spaces needed, [1]. According to Njeru and Orodho [2], the world conference on Education for All (EFA) held in 1990 at Jomtien Thailand, saw most of the developing countries commit to provide their school going children with universal access to the first cycle of Education. This was reiterated in another conference on EFA held in Dakar Senegal in 2002 which resolved to attain the anticipated goals by 2015. Wachye & Nasongo, [3] states that as a result of this declaration; there was an increase in enrolment at primary school level throughout the developing nations.

In Singapore, the government set aside 560 million Singapore Dollars (396.6 million US. Dollars) to be used from November 2009 in the construction of 11new primary schools along with upgrading additional 28 existing schools. This was the first phase in the ministry of education's plans to upgrade primary school infrastructure in order to facilitate the situation of primary schools to a single sessions by 2016. The San Diego Unified School District project upgraded and repaired 165 schools and constructed new ones. The project began in 1988 and ended in 2002 at a cost of US Dollars 1.51 billion [4].

In Africa, school infrastructure projects are faced with numerous financial challenges, especially the Sub Sahara region. The UNESCO's GEM Report Policy Paper 23 (January 2016) opined that every school going child should have learning materials such as a textbooks. The quality of education for all in a country is determined by the amount of finances allocated to education sector. According to the report, the level of commitment to finance textbooks is a boost improved learning outcomes, especially in Sub Sahara Africa who's Countries are characterized by low incomes, congested classrooms and inadequate facilities. In Cameroon for instance, in 2012, the student book ratio was a challenge as fourteen students in grade two shared one mathematical text book [5]. The Sub-Saharan Africa Statement on Education post-2015, (Kigali statement) observed that quality education is achieved through allocating adequate finances to the government funded schools to ensure physical infrastructure facilities such as; classrooms, toilets, laboratories are sufficient in government funded learning institutions.

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.

The study by Kyambalesa (2010) indicated 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.

School infrastructural programs have not been successfully implemented in Gucha District, according to the findings of Omwoyo (2010). A related study that sought to assess the effectiveness of KESSP infrastructure grants on improvement of primary school infrastructure in Kiambu District established that in spite of KESSP infrastructure funding, there was a shortage of infrastructure and the existing facilities were in poor condition (Waithera, 2015).

Mugo (2015) noted that many secondary schools in Kenya have been receiving funds meant to establish or improve the existing facilities such as classes, dormitories, laboratories, libraries, especially since the current government took over in 2003. It was also established that most donors do not assess and evaluate projects that they had funded and do not give any recommendations and this affected the implementation of the projects, (Mugo, 2015).

2. THEORETICAL FRAMEWORK

The study was based on the Critical Chain Project Management (CCPM) theory. Eliyahu and Goldratt (1997) came up with this theory, although it differs with views of other theories which had its roots to critical path. These theories stress on need and order of each project work. 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 [6,7]. 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 [8-10]. 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.

3. LITERATURE REVIEW

In the United States of America, renovation and school construction have been considered traditionally to be responsibility of the State. However, the US federal government came up and established a role of undertaking financing of projects, constructing and doing the renovation. Schools were exempted from taxation on income and received government support on construction of physical facilities using State and local bonds in terms of loans and grants [11].

In Jamaica, substantial private investment in education from institution particularly the church is evident. Education budget is supplemented by other government's expenditure such as deferred financing for school building as well as from the Jamaica Social Investment Fund. In addition, the government is fostering new private and public sector partnership using deferred financing to create new school places at all levels [12].

Studies have observed resource organization such as financial, human, leadership and technological as essential pillars that strengthen an organization and drives it to better production of quality goods and services [13]. This view is in line with Wheelen and Hunger (2008) whose study showed that the resources of any organization are its essential assets and pillars that strengthens organization to better production. According to Armstrong [14], people and their experience, skills and abilities together with ability to deploy these to the benefit of the organization are viewed to be making important support towards the success of the organization.

Funding is the practice either by the organization or government providing resources in form of finance, human factor, time factor and other key requirements to boost the project being undertaken. Gyula (2012) observed that the term financing is used when organizations or firms receive financial support from external sources.

Financing is also used in reference to the firms using their internal monies and assets to finance it projects. Funds availability could also be termed as readily available money that can be withdrawn to facilitate the firms' activities. Chan (2007) mentioned that project becomes successfully completed only with the availability of adequate funds. Jackson [15] adds that the important factor that affects effective timely project implementation timely funds availability is an important factor that influences delivery of a project. Provision of funds and implementation requires managers with relevant management skill. The funds are needed for capital development, training of personnel, hiring of labour, acquisition of materials, monitoring, documentation and evaluation. Sambasivan and Soon (2007) was of the view that keeping everyone informed through report presentation is essential and these enables project managers to undertake planning and monitoring.

Wasike (2012) argues that responsibilities and roles poorly defined in either government departments or companies distort implementation. For any project to realize effective operation, every involved individual must not only focus on their roles but also understand what other players within the project do. Where the responsibilities and the roles of each individual is not well stipulated, then confusion dominates and people will be accountable. Ayudhya [16] opines that absents of qualified project personnel totally causes confusion throughout the phases of implementing a project.

Kaliba (2009) argues that most projects funded by government do not succeed due to low pay for the hired personnel which lowers employees moral. The government at times may end up landing on unfaithful employees as a result of meagre pay, something that renders project implementation becoming unsuccessful. Studies indicate that in both central Kenya and Cambodia, projects funded by government were noted to have been successful between the years 2004-2010 due to the fact that the needed resources were adequately allocated on time. This was seen as a motivation to the employed personnel who ended up improving on their managerial tactics, hence resulted to a series of project successes in the regions (United Republic of Tanzania, 2009).

The United Nation's 2010 report showed that in both developing and developed nations, projects lacking adequate resources in terms of finance is one of the common challenge encountered by implementation of projects though the paramount problem is how people handles finances for the intended task to ensure it completion. Financial as well as other project managers need to be educated and empowered on financial literacy so that they be acquainted with financial knowledge, know the significance of this finance to the projects and make informed decision [17,18]. In a wider perspective, it is observed that clear knowledge on finances helps personnel to understand the crisis that has been severally encountered, hence finding possible long lasting solutions.

The studies by Carter [19] on the challenges facing road infrastructure firms in Sub Sahara Africa in their efforts to delivery of quality projects showed that, the impact of outsourcing technical human resource by local construction firms several challenges in comparison with their counterparts' foreign construction companies, especially in acquiring of personnel with relevant technical knowledge in project management and implementation. Carte, in his study found out that every project is unique and resource requirement differs from that of other project. It is therefore the responsibility of project managers to ensure that the available allocated resource facilitates the project till completion point.

In Rwanda, for instance, government projects face many challenges emanating from loopholes found in procuring system. The core challenge relates to project planning and implementation [20,21]. The study indicated that a number of projects have been abandoned without being completed and some take a longer period to complete. To support and enhance timely completion of government projects therefore, the project funds disbursing policy was adopted basing on their performance (GoR, MINECOFINE, 2013).

Majanja (2012) conducted a study on financing constraints of infrastructure projects in Kenya. The study covered 87 construction firms. Two alternative variables to measure financing constraints were used. The first one was based on the degree of financing constraints that firms face and the other was the use of bank credit by firms. To measure perceived financing constraint, respondents were asked to rate access to financing as a constraint of project performance. The study results found out that financing constraints were a major obstacle faced by

construction firms. The study found out that the local construction firms faced critical issues and problems which affected financing of their projects. He further suggests that government should foster Public-Private Partnerships in order to raise adequate funds for constructing projects.

Simmons (2017) also noted that local firms had a problem of accessing credit facilities as they were viewed to lack collateral security. However, Majanja assumed a direct relationship between finance and success of a project. This study included other important variables such as monitoring and evaluation and group dynamics management so as to improve the viability of the results. A study by Gitenya and Ngugi [22] on the assessment of determinants of performance of housing projects in Kenya pointed out that most of the local firms engaged in infrastructure projects are often hindered by lack of adequate financial resources. There is always a budget for the project and this is a major constraint.

Wysocki [23] stated that while the overall resources available may be in theory sufficient to complete the project, there were difficulties arising out of the way in which the project has been scheduled. For example, there may have been a number of activities scheduled to take place at the same time and this could not be possible given the amount of resources available. The amount of resources available therefore, plays a critical role in the success of a project undertaken. Project managers are advised therefore to optimize the utilization of resources so as to ensure project completion within the budgeted cost [24].

Omolo (2015) opines that there is a significant relationship between funding and success or failure of implementation of projects. In his study he concluded that majority of the projects in the study lacked timely funding which consequently negatively impacted on the implementation timelines of the school infrastructure projects.

According to Republic of Ghana Appraisal Report [25], laws and project policies have been enacted to guide planning, management and timely completion through transparency of resource utilization and early disbursement of project funds for the activities already approved.

4. METHODOLOGY

Research design refers to a method of collecting and analysing data to generate answers to the research problem, Bryman and Bell [26]. It is the glue that binds the elements of research together. This research adopted a descriptive survey design which involved observation, interviewing or administering of questionnaires. The design was suitable for this research on the grounds that the study sought to collect information from the respondents on their opinions and beliefs.

According to Babbie [27], target population refers to the total collection of all units of analysis which a researcher wishes to consider for the intended study. In this 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.

Table 1. Target population

Target population	Total
Principals	63
Board of Management Members	407
Sub County Directors of Education	7
County Directors of Education	2
Total	**479**

Table 1 shows the informants used in the study. There were a total of 63 principals, 407Board of Management (BOM), 7 Sub County Directors of Education in both counties and 2 County Directors of Education making a total of 479 respondents.

Best and Kahn (2011) defined sample as a small proportion of a population selected for observation and analysis. The sampling procedure on the other hand refers to the process of selecting a sample or the subset from which the research was done [28]. The study adopted cluster sampling technique. The clusters in this study comprised those of Principals, Board of Management and Sub County Directors of Education and County Directors of Education. The sample size used was obtained using Taro Yamane's formula [29].

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

Where:

n=the sample size
N=the size of population (479)
E=the error of 0.05percentage points
n=479/1+479(0.05*0.05)
=218

The sample size therefore, was 218 respondents who were distributed as illustrated in the Table 2 that follows.

From Table 2, purposive sampling technique was used to select the sample for Principals; hence all the principals of 63 targeted schools were respondents. 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 sum of 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 selected school was represented by any two BOM members.

The purpose of a tool or instrument in research is to measure the variables of the study [30]. According to Creswell (2013), survey techniques collect quantitative data using tools of data collection such as questionnaires and then analyze the data to give a description of trends on responses to the questions from the respondents. Usually, it uses interviews and questionnaires to find out attitudes, preferences, opinions as well as group perceptions on an area of interest. The data collection instruments which were used bin the study included interview schedules and questionnaires.

5. FINDINGS

This research sought to find out the level of availability of funding influence (independent variable) on the infrastructure project implementation in secondary schools. The respondents were asked to show their levels of agreement using five point Likert scale as; 5 = strongly agree, 4 = agree, 3 = uncertain, 2 = disagree and 1 = strongly disagree This was to specify their understanding and perceptions on the following key statements regarding management and implementation of physical projects in schools; allocation and disbursement of government funding, donor funding availability, availability of PTA's approved project development funds and availability of funds from school alumni associations.

On the level of allocation and disbursement of infrastructure government funding to the two counties, The results from the findings showed that majority of respondents from Trans Nzoia County 49 (47.0%) were dissatisfied with the allocation and disbursement of infrastructure of government funding as opposed to 43 (41.0%) who were in agreement with the allocation and funding. Comparatively to West Pokot County, a large percentage of the respondents, 59 (59.9%) were in agreement to allocation and disbursement of infrastructure government funding compared to 37 (37.6%) who were disagreed to the same. It was therefore observed that government allocated more funds to physical infrastructural development in West Pokot County compared to Trans Nzoia County.

On availability of CDF funding towards supporting physical development in schools, majority of respondents from Trans Nzoia County 48 (46.1%) were dissatisfied to support of CDF in physical development in secondary schools as compared to 46 (44.1%) who were in agreement to the same. This compared favourably to West Pokot County where 60 (60.4%) of the respondents were in agreement to CDF playing a big role in physical school development. This was evident that CDF funding in West Pokot County was more favourable compared to schools in Trans Nzoia County.

Question three sought to find out the availability of county government funding towards physical school development. It was observed that there was more funding in West Pokot County with 43 (44.1%) in agreement to county government funding as opposed to 37 (39.1%) who were indifferent to the same. Conversely, it was observed that, in Trans Nzoia County, majority 54 (51.9%) disagreed to county government supporting secondary school infrastructural development as opposed to 32 (31.7%) who were in agreement to the same. This evident that there is more support of county government support in school physical development than in Trans Nzoia County.

On availability of donor funding, majority of the respondents over 65 (66.4%) in West Pokot County were in agreement to there being donor funding as opposed to 58 (56.0%) who disagreed to there being donor support towards school physical development in Trans Nzoia County. It was evident therefore that there was more donor support in West Pokot compared to Trans Nzoia County in terms of physical infrastructure development.

Table 2. 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**

Table 3. Availability of funding and implementation of infrastructure projects

Statement	Trans Nzoia County									
	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Allocation and disbursement of infrastructure government funding	16	15.3	27	25.7	12	11.9	19	18.3	30	28.7
Availability of CDF funding	21	20.3	25	23.8	10	9.9	35	33.7	13	12.4
Availability of county government funding	17	16.8	15	14.9	17	16.3	38	36.6	16	15.3
Availability of donor funding	15	14.4	7	6.9	24	22.8	22	21.3	36	34.7
Availability of approved PTA development project funds	16	15.8	16	15.8	8	7.9	30	29.2	32	31.2
Statement	**West Pokot County**									
Allocation and disbursement of infrastructure government funding	25	25.2	34	34.7	2	2.5	11	10.9	26	26.7
Availability of CDF funding	27	27.2	33	33.2	14	13.9	23	23.8	2	2.0
Availability of county government funding	29	29.7	14	14.4	16	16.8	29	29.2	8	9.9
Availability of donor funding	31	31.7	34	34.7	9	9.4	12	11.9	12	12.4
Availability of approved PTA development project funds	4	4.0	44	42.6	2	2.5	9	11.9	38	39.1

On the availability of approved PTA development project, there is an indication that in the two counties, there were no projects running on PTA approved funds given that; 62 (60.4%) of respondents in Trans Nzoia County were in disagreement to the same and equally, majority of the respondents 47 (51.0%) in West Pokot County were also indifferent to PTA funded programs on physical development. This could have been the case given that it there is a government policy guideline on zero rating PTA funded projects. However, it remains to be seen how schools are managing the funding challenges to support infrastructural development. The study found out that; government funding allocation and disbursement, the donor funding availability, the approved PTA project funds availability, and the availability of school alumni funding towards the projects to a large extend influenced infrastructure project implementation and management in schools. The availability of funds from County government and CDF were also rated to have influenced infrastructure projects implementation most especially in West Pokot County.

The respondents from both Counties viewed CDF and County government funding to be insufficient and erratic. The larger percentage of respondents expressed concern on how the funding from County governments and CDF in both Counties were delayed.

The study findings were in agreement to a study by Jackson [15] who found out that the availability of funds for the project was an essential element that affects and influences its delivery. He further states that the more the funds available, the times the project will be completed and the opposite reverse true. As noted by Kaliba [31] who argues that many government aided projects do not succeed due to the fact that government engage and employ personnel at a low pay, a fact that discourages most employees. Sometimes, the government ends up employing wrong people on the job, who may end up derailing the project. This research found out that failure to source for and allocate sufficient funds to the project may lead to its failure. The study is also in agreement with studies by the UN report (2010) which indicates that inadequate or even lack of funds which is essential resource for projects in both developed as well as developing counties is one of the various challenges affecting implementation of projects. The study too is in concurrence to Carter [20] who in their study found out that the common challenge facing every organization is meager resources to accelerate project success. The primary function of the project managers is to device best ways of executing a project successfully using the available resources. So just like in the road sector, school managers ought to be creative in sourcing for funds. The study agrees with Wysocki [24] who observed that many problems result from the way physical projects have been scheduled, though the availability of resources generally stands as insufficient and in theory to successfully complete the planned projects. The top project managers needs to optimize and ensure proper use of the available resources in order to boost completion of projects within the costs and timeline, [25]. Studies by Omolo [32], suggests that there is a significant relationship between funding and success or failure of project management and implementation. Allen further found out that most of the project within the scope of his study lacked timely funding which consequently impacted negatively on the implementation timelines of projects.

6. CONCLUSION

The research concludes that there is under funding from national government, constituency development fund and the county government, especially in Trans Nzoia County. The study concludes that there is variance in allocation of CDF in Trans Nzoia and West Pokot Counties. The study also concludes that there is more county government funding in West Pokot than Trans Nzoia County. Finally the study concludes that there were no projects that were running on PTA funding during the time of study.

7. RECOMMENDATION

The study recommends that the government through the ministry of education should equitably allocate and disburse infrastructural funds to all the counties basing on the need formula. The study further recommends that the County governments should endeavor to fund some infrastructural programs in secondary schools despite the fact that their mandate is in early childhood education. The study also recommends that, the school managements should endeavor to write proposal to donors to fund and develop infrastructure programs like it is the case in West Pokot County. To bridge the gap left after the government through the education policy framework zero rating the PTA component, the government through the ministry

of education should budgetary allocation towards supporting of physical facilities in secondary schools within the country.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Virginia Department of Education © Commonwealth of Virginia. Facility Construction and Maintenance School Construction Projects; 2012. Available:http://www.doe.virginia.gov/support/facility_construction/school_construction/inde x.shtml
2. Njeru E, Orodho J. Education Financing in Kenya: Secondary school bursary scheme implementation and challenges. IPAR; 2013.
3. Wachiye JH, Nasongo WJ. Access to secondary education through the Constituency bursary fund in Kanduyi constituency, Kenya; 2010.
4. Kennedy M. Introducing new school Designs; 2012. Avilable:http://www.google.co.ke
5. UNESCO Institute for Statistics. Leaving no one behind: How far on the way to universal primary and secondary education? (Policy Paper 27/Fact Sheet 37); 2016.
6. Chirwa D, Samwinga V, Shakantu W. Opportune project delivery: A contextual analysis of Malawian Educational ventures. Instruction Infrastructure Management Unit (EIMU), Lilongwe; 2011.
7. Cresswell JW. Research design: Qualitative and quantitative approaches. Thousand Oaks, C.A: Sage Publications; 2013.
8. Omolo EJ. Factors influencing implementation of project management in public- funded projects in Kenya the case of Kenya Pipeline Company, Nairobi County. Unpublished thesis, University of Nairobi; 2015.
9. Amponsah R. The real project failure factors and the effects of culture on project management in Ghana; Ghana Institute of Management and Public Administration (Gimpa)Accra, Ghana: ICBE-RF Research Report no. 45/12 project atmosphere and Business Environment Research Fund; 2012. Available: www.trustafrica.org/icbe
10. Chirwa D, Samwinga V, Shakantu W, (2011) Timely project delivery: A case study of Malawian educational projects. Education Infrastructure Management Unit (EIMU), Lilongwe, MALAWI, ASOCSA Journal. 2011;46: 567-584. Available:http://uis.unesco.org/sites/default/files/documents/f s37-leaving-no-one-behind-how-far-on-the-way-touniversal-primary-and-secondary-education-2016en.pdf Accessed 6 November 2020
11. Cornman SQ. Revenue and expenditure for public elementary and public department of education and science (2009). Smart Schools Report on Procurement in Public Secondary Schools in Ireland; 2010.
12. Jamaican National Development Plan Education Draft Sector Plan; 2009.
13. Kamau CG, Bin Mohamed H. Efficacy of monitoring and evaluation of function in achieving project success in Kenya: A conceptual framework. Science Journal of Business and Management. 2015;3(3): 82-94.
14. Armstrong M. Armstrong's handbook of human resource management practice. London: Kogan Page Ltd; 2009.
15. Jackson K. Fundamentals of Project Performance Measurement; 2010.
16. Matta FN, Ashkenas R. Why Good Projects Fail Anyway, Harvard Business Review Leader's Handbook; 2003.
17. Michael. School Planning and Management, New York; 2015.
18. Mulkeen A. Teachers in anglophone Africa: Issues in teacher supply training and management. Washington: World Bank; 2010.
19. Ayudhya BIN. Evaluation of common delay causes of construction projects in Singapore. Journal of Civil Engineering and Architecture. 2011;5(11): 1027–1034.
20. United Nations Children's Fund. The investment case for education and equity. New York, NY: Author; 2015. Available:https://www.unicef.org/media/50936/file/Investment-Case_for_Education_and_Equity-ENG.pdf Accessed 27 November 2020.
21. Sub-Saharan Africa Statement on Education post-2015 (Kigali statement), Sub-Saharan Africa Regional Ministerial

Conference on Education Post-2015, Kigali, 9–11 February; 2015.
22. Carter M. Factors leading towards realization of quality infrastructutre in Sub-Sahara Africa. Review of Economic and Statistics. 2012;49: 92-107.
23. Githenya MS, Ngugi K. Assessment of determinants of implementation of housing projects in Kenya. European Journal of Business Management. 2014;1(11): 230-253.
24. Wysocki RK. Effective project management: Traditional, agile, extreme. Indianapolis, IN: Wiley; 2012.
25. Allen TJ, Katz R. Age, education and the technical ladder. IEEE transactions on Engineering Management. 2012;39(3): 237-245.
26. Republic of Ghana budget. Theme - infrastructural development for accelerated growth and job creation; Highlights of the 2012 Budget; Ministry of Finance and Economic Planning; 2012.
27. Bryman A, Bell E. Business research methods. Oxford University Press, USA; 2015.
28. Babbie ER. The practice of social research. Nelson Education; 2015.
29. Kothari CR, Gaurav G. Research methodology-methods and techniques (3rd Ed.). New Delhi: New Age International Publishers Ltd; 2014.
30. Yamane's T. Elementary Sampling Theory. New Jersey: Prentice-Hill; 1967.
31. Mugenda A, Mugenda O. Research methods. Quantitative and Qualitative approaches. Nairobi: Acts Press; 2009.
32. Kaliba C, Muya M, Mumba K. Cost escalation and schedule delays in road construction projects in Zambia. International Journal of Project Management. 2009;27(5): 522-531.

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