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Influence of Staff Managerial Competence in Construction on Performance of Building Infrastructure Projects in Public Secondary Schools in Soy- Sub County, Uasin Gishu County, Kenya

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Abstract:

The purpose of this study was to determine the influence of staff managerial competence in construction on performance of building infrastructure projects in public secondary schools in Soy sub-county, Uasin Gishu County, Kenya. The objectives of the study are: to determine the influence of procurement knowledge on performance of building infrastructure projects in public secondary schools in Soy sub-county, Uasin Gishu County, Kenya, to assess the influence of leadership skills on performance of building infrastructure projects in public secondary schools in Soy sub-county, Uasin Gishu County, Kenya; to examine the influence of material management skills on performance of building infrastructure projects in public secondary schools in Soy sub-county, Uasin Gishu County, Kenya; to establish the influence of construction capability on performance of building infrastructure projects in public secondary schools in Soy sub-county, Uasin Gishu County, Kenya. The study was guided by theory of performance. Literature review is based on the objectives. The study adopted descriptive survey research design. The study had a target population of 163 drawn from building infrastructure project stakeholders in public secondary schools in Soy Sub County. The sample size of 113 respondents derived using Krejcie and Morgan table (Krejcie & Morgan, 1970). Questionnaires and interviews were used to collect data. Reliability and validity test were conducted from data obtained from a pilot study conducted in 10 public secondary schools in Turbo sub-county. Reliability value of $p = 0.7$ and above is reliable after a correlation test through a test re-test technique. Data was analysed using qualitative, descriptive and inferential statistics. Data analysis was aided by use of statistical software called SPSS version 22. Final report was written documenting findings, conclusions and recommendations. The finding of this study is of significance to NCA, CDF secondary schools and researchers. The findings of the study showed that procurement knowledge, leadership skills, material management skills, and construction capability in construction influence positively performance of building construction projects in public secondary schools. The study did further establish that quality control, accountability, design interpretations skills, funding, and staff control to be useful ingredients for performance of construction projects.

Keywords: Staff managerial competence, construction, performance of building infrastructure, projects, public secondary schools, Uasin Gishu County, Kenya

1. Introduction

Infrastructural buildings in schools have become a concern to all stakeholders especially the government. UNESCO (2008) holds that a good learning environment constitutes secure, un-crowded and well-maintained schools. There has been an increase in building and construction in Kenya and all over the world. Governments all over the world committed themselves to the provision of education for all (EFA) at Dakar, Senegal in the year 2000. United Nations Children's Education Fund (UNICEF) (1998) noted that education is a fundamental right of every child according to United Nation (UN) charter of 1948.

Building construction has therefore become a flourishing business all over the world. Despite some impressive growth figures, many delicate democracies continue to face tenacious economic and social problems of poverty, infrastructure decay, limited access to basic resources and lack of private sector jobs (Wibsono, 2007). There are several key players as far as buildings construction is concerned especially public institutions infrastructure buildings. Most essentially, the client/owners are the most significant stakeholders in this noble industry. Other key stakeholders in this noble process are engineers, contractors, building owners in this case the government and funders. Construction of the building is meant to meet the needs of the clients and hence satisfy their need. The work done by the contractors and the engineers must meet the requirements and needs of the client. The need may range from the usefulness of the building, aesthetic value and even completion time among other factors.

Customer satisfaction is consequently an important issue for construction participants who must continuously seek to improve their performance if at all they want to survive in both the local market and the global marketplace. Nonetheless, customer satisfaction has continued to be an elusive issue for a majority of construction professionals (Adede, 2012). However, this has not been the case in some cases since some commercial buildings have failed leading to collapse of the whole building or part of the building. Due to this fact, there have been incidences where the building either does not serve the purpose or it collapses. In some cases, it has led to some elements of cognitive dissonance thereby affecting the performance of the building.

In Malawi, the quality and adequacy of school infrastructure in terms of classrooms, access to water and sanitation facilities have always been a challenge, hence contributing to low enrolment, high dropout rates and poor performance particularly for girls (Musyoka, 2013). Collapse of the building either midstream or upon completion is the most common scenario. Cases of building collapsing is still commonly happening in spite of increasing diffusion of engineering knowledge and skills over the years and this demands for some re-examination of professional development in both building production and control process (Dimuna, 2010).

Project delay is also a key concern top many project managers since there is a general feeling that it adversely affects performance of building. Chai and Yusof (2013) carried a study on reclassifying housing delivery delay in Malaysia state and found out that "time is essence" and "time is revenue" this being a technique of capturing the association between project delay to revenue loss. Financial constraints can also lead to delay, abandonment or even the performance of the building. Actually, Hussin and Omran (2012) indicates that 70% of the projects abandoned in Malaysian housing construction projects was mainly due to financial difficulties of house developers. According to their findings, these abandonment or delays result in poor usage of the building. The case in Malaysia is not an isolated since these constraints and resulting psychological effects are common all over the world. A study by Koushki, Al-Rashid and Kartam (2005) in Kuwait on construction contract delays showed that 64% of owners had established penalties for any contract delay. This has led to an increase in cost for the contractors thereby leading to hasty and haphazard workmanship which eventually affect the performance of buildings.

In Africa, delays and poor workmanship in construction projects delivery is also a common reality Ayudhya (2011). Hussin and Omran (2011) indicates that in Nigeria, seven out of ten public projects surveyed suffered either delays in their execution or upon completion, lacked zeal that the proprietors expected. This is a common phenomenon in many African countries and Kenya is not an exception. It is even more prevalent in CDF and county and national funded projects. Also cited by the same authors as cited by Munyoki (2014) observed that in Nigeria 5-10% of construction pre-contract cost is based on contingency. Contingency in the sense that projects delay and sometimes rework hence attracting extra cost especially due to changes in the cost and decay of materials. Good project planning essentials are therefore prudent in ensuring that projects are completed as planned in terms of cost, time and aesthetic value. Before spending significant time and resources on a project, project practitioner should be able to identify the biological importance and likelihood of project success at potential project sites (Battelle, 2003).

The government funded projects are managed by various parties/state agencies who include: The Government of Kenya, the client in this case the school in which the project is being implemented, the contractor, who undertakes the actual work of putting up the project, collaborators such as the Ministry of infrastructure, National Environmental Authority (NEMA) among other stakeholders. In terms of contemporary Public administration, historically African states have experienced fused, personalized and at best highly centralized governance systems and practices (John-Mary Kauzya 2007).

Munyoki (2014) states that the quest for improved productivity, quality, speed and operational effectiveness and efficiency in the public sector worldwide has led to the use of numerous management techniques and tools. These include total quality management, performance contracting, bench marking and the balanced score card among others to attain the feat (Obong'o 2009). In its effort to ensure prudent management of resources/funds released for development projects. The government has implemented a system whereby the funds are disbursed directly to the contractors instead of releasing the money to the institutions where the project is been constructed. This has helped indeed speed up the completion process but not adequately neither has it improved performance of the infrastructural building.

2. Research Methodology

The study adopted descriptive survey research design in an attempt to determine the influence of staff managerial competence in construction on performance of building infrastructure projects in public secondary schools in Soy sub-county, Uasin Gishu County. This research approach seeks to collect data without manipulating neither research variables nor the respondents. This design is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2004). He further states that a descriptive design makes it possible for the researcher to undertake a robust and in-depth research with a view of realizing a holistic and explanation and examination of phenomenon (Orodho, 2005).

This study had a target population of 163 comprising of Ministry of public works officers, contractors in the sub county, CDF committee members since they fund so many projects, education ministry officers and secondary school heads & deputies. These are the key stakeholders who are involved in building infrastructure projects in public secondary schools.

According to Gay (2009) Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected. Sample size is the selected number of individuals for the study.

The researcher sampled 113 respondents. This was derived by the use of Krejcie and Morgan table (Krejcie & Morgan, 1970) to determine the respondents.

The study used stratified simple random sampling as the most useful method to distinct samples size and sampling procedure. This is a method where the population is divided into distinct and homogeneous groups called strata and then subjecting each stratum to simple random sampling. Kothari (2005), on the other hand defined stratification as the methodology of making divisions among the target population to obtain the required sample size. Data was collected through the questionnaire and interview schedule. The questionnaires were administered to the respondents according to the stated sample size.

A structured questionnaire based on the specific objectives was used to gather primary data both quantitatively and qualitatively. The questionnaires were issued to the contractors, school heads and deputies. The researcher used research assistants to administer the questionnaires which are designed using five-point Likert Type scale (1-5) where 1 is strongly disagree and 5 is strongly agree. The questionnaires were pretested after which corrections were made on wording, layout, sequencing and validity of the questions, the final draft of the questionnaire was therefore finalized and disseminated (Frazer & Lawley, 2000). This be done after the researcher sought assistance in development of the instrument from university supervisor.

According to (Koul, 1993), most techniques for measuring perceptions and attitudes rely heavily on verbal material in the form of questionnaires. The questionnaires consisted of respondents' background information and based on the study objectives. This type of instrument is chosen because it enables the researcher to obtain a lot of information over a short period of time. The instruments also ensured anonymity of respondents as they were not asked to identify themselves. Structured questionnaires also helped in determining a variety of aspects from respondents which included beliefs, thoughts, knowledge, and motives.

For triangulation purposes, the study used interview schedule to collect data from the selected respondents. The selection of this tool was guided by the nature of data to be collected, time available, objectives of the study and the simplicity of the instrument itself. Interview schedule is a set of prepared questions designed to be asked exactly as worded on the respondents (Radu, 2015). Interviews be conducted to the ministry of education officers and the ministry of public works officers.

The study conducted a pilot study in ten public secondary schools in Turbo sub - county. According to Mugenda and Mugenda (1999) a 10% representative of a population is sufficient for a pilot study. The information obtained from the pilot study used to test the reliability of the research instruments. After piloting, data was collected.

The data collected was prepared for analysis by editing in order to detect errors & omissions and correct where possible thus ensuring that the data is accurate and consistent with the facts gathered. Secondly, coding follow by assigning numerals/symbols to the answers. Thirdly, there be classification of the data which involves arranging the collected data into classes on the basis of common characteristics. The summarized data were then be subjected to analysis through one-dimensional descriptive analysis which entails the use of frequencies, percentages, measures of central tendencies (mean) and measures of dispersion (standard deviation). This then will be followed by a simultaneous analysis of all the variables using Statistical Package for Social Sciences (SPSS). Finally, the researcher made conclusions and recommendations based on the interpretation which be done later in chapter five. Data therefore then be presented in frequency tables in accordance with the stated objectives and the questionnaires.

3. Findings

A total of 20 respondents (ministry of public and education officers) were interviewed from a sample size of 26 that represented a response rate of 77% of interview. A total of 87 respondents (school heads & deputies, CD committee members, contractors) were issued with questionnaire but only 68 were correctly filled that represented a 78% questionnaire response rate. According to Kothari (2010) a response rate of 75% and over is sufficient for the study to proceed.

The study sought to assess from the respondent's knowledge related to competency levels in the working area. The questions were on the number of years worked in projects, their profession, if the staffs have adequate skills, and which is the priority area in ensuring effective performance of the construction projects. Findings were reported in table 1.

Items	Response	F(n=68)	%
Number of years worked on construction programs	0-5 years	12	18
	6-10 years	34	50
	11-15 years	16	24
	15 & above	6	9
What is your profession?	Teaching	21	31
	Engineering	4	6
	Planning	24	35
	Procurement	6	9
	Accounting	13	19
Do you feel that construction staffs have adequate skills for proper performance of infrastructural projects?	Yes	33	49
	No	35	51
The priority for an effective performance of infrastructure projects in public secondary schools	Procurement knowledge	8	12
	Leadership skills	14	21
	Material management skills	26	38
	Construction capability	20	29

Table 1: Respondents Construction Competency Related Information

Findings as per table 1 shows that 12(18%) and 34(50%) of the respondents have worked for a period between 0-5 years and 6-10 years respectively, while 16 (24%) and 6(9%) have worked for a period between 11-15 years and 15 years and over. The findings show that majority of the respondents have worked between a period of 6 to 15 years in building infrastructural projects in schools.

Respondents were asked to state their professional area; the findings as presented in table 1 were as follows: 21(31%) of respondents were in teachers, 4(6%) were in engineers, 24(35%) were planners, 6(9%) were procurement professionals, 13(19%) were accounting persons. The findings show that a significant more of the respondents were planners and teachers in profession. Respondents were asked if they feel the construction staff have adequate skills for proper performance of infrastructural projects. Findings showed that 33(49%) agreed that they have skills, while a slightly higher number 35(51%) refuted they do not have any skills in construction.

Findings on the priority for an effective performance of infrastructure projects in public secondary schools as presented in table 4.2. Showed that 8(12%) of the respondents thought the priority is on procurement, 14(21%) of respondents stated leadership skills, 26(38%) stated it is on material management skills, in addition 20(29%) mentioned that the priority area is on construction capability. According to the findings it clearly illustrates that in building and construction priority should be given to materials management skills and construction capability for a better performance.

The first objective of the study was to find out how procurement knowledge influence performance of building infrastructure projects in public secondary schools. Findings were obtained using responses from interviews and questionnaires.

The study sought to establish from the respondents if the procurement knowledge influences performance of building infrastructural projects in public school.

Question	Response	F(n=68)	%
Does procurement knowledge influence performance of building infrastructure projects in public secondary schools?	Yes	39	57
	No	29	43

Table 2: Procurement Knowledge and Performance of Building Infrastructural Projects

Table 2 shows that a significant majority 39(57%) agreed that procurement knowledge influence performance of building infrastructural projects in public secondary schools, while 29 (43%) refuted that it does not. The findings concur with Bundi (2011) who states procurement knowledge is essential in production process.

Respondents were asked to state their level of agreement with various statements outlining the relationship between procurement knowledge and performance of building infrastructure projects in public secondary schools. Findings were reported in table 3.

Statement	F(n=68)	Mean	SD
Tender documentation enhances performance of building infrastructure projects in public secondary schools	68	3.826	1.11
Performance of building infrastructure projects in public secondary schools is greatly influenced by funding	68	4.002	0.744
Tendering influences performance of building infrastructure projects in public secondary schools	68	4.231	0.991
Performance of building infrastructure projects in public secondary schools is really influenced by lead time in procurement	68	2.425	1.204
Specification of projects in all aspect's influences performance of building infrastructure projects in public secondary schools	68	3.765	0.936

Table 3: Summary of Procurement Knowledge and Building Performance

Findings as per table 3 showed that respondents with a mean of 3.826 (SD=1.11) slightly agreed that tender documentation enhances performance of building infrastructure projects in public secondary schools. Findings indicated that respondents with a mean of 4.002 (SD=0.744) agreed that performance of building infrastructure projects in public secondary schools is greatly influenced by funding. The findings concur with Olatunji (2010) who identifies project procurement as one of the constraints or situations which outside the immediate control of parties involved to the contract agreement but still affect the even flow of scheduled activities. On whether tendering influences performance of building infrastructure projects in public secondary schools a mean of 4.231 (SD=0.991) agreed that it does so. The study further established with respondents with a mean of 2.425 (SD=1.204) disagreeing that performance of building infrastructure projects in public secondary schools is really influenced by lead time in procurement. Findings showed further that specification of projects in all aspects, influences performance of building infrastructure projects in public secondary schools with respondents with a mean of 3.765 (SD=0.936) slightly agreeing with the statement.

The study sought to establish from the interview conducted the extent to which procurement competency skills influence performance of building infrastructure projects in public secondary schools' findings were presented as follows:

Seven of the public work officers and 5 ministry of education officers agreed that knowledge of tendering process is important in ensuring activities of construction of projects are achieved. Six of the public officers stated that project sponsors need to follow outlined procurement procedures to avoid conflicts and legal cases.

Findings show that it is important to have procurement management skills in ensuring performance of building infrastructure projects in public secondary schools. The findings are supported by Erriksson (2012) who carried a research on effects of procurement on project planning and found out that procurement plays a very important role not only in completion but also in performance of the project.

The second objective of the study was to establish how leadership skills influence performance of building infrastructural projects. Responses to define the relations were obtained using questionnaire and interviews.

The respondents were asked to state leadership skills influence performance of building infrastructure projects in public secondary schools. Findings were presented in table 4.

Question	Response	F(n=68)	%
Does leadership skills influence performance of building infrastructure projects in public secondary schools	Yes	42	62
	No	26	38

Table 4: Leadership Skills Influence Performance of Building Infrastructure Projects

Table 4 findings showed that 42(62%) of the respondents agreed that leadership skills influence performance of building infrastructure projects, while 26(38%) refuted that it does not. The finding clearly shows from the responses that leadership influences performance of building infrastructure projects. The finding is supported by Omran et al (2012) who carried a research on performance of construction industry in Sudan and found out that leadership is a very fundamental factor that influences not only the performance of construction industry but also performance of the project as a whole.

The respondents were asked to state their level of agreement from the following statements defining the relationship between leadership skills and performance of building infrastructure project. Findings were reported in table 5.

Statements	F(n=68)	Mean	SD
Proper staff control will influence performance of building infrastructure projects in public secondary schools	68	4.234	0.563
Interpersonal relationship affects performance of building infrastructure projects in public secondary schools	68	3.664	1.023
Reputation of leaders influences performance of building infrastructure projects in public secondary schools	68	3.782	0.856
Performance of building infrastructure projects in public secondary schools is greatly influenced by degree of delegation of responsibility	68	2.451	0.982
Accountability of organization's managers influences performance of building infrastructure projects in public secondary schools	68	4.348	1.223

Table 5: Leadership and Performance of Building Responses

Findings from the table 5 showed that respondents with a mean of 4.234 (SD=0.563) did agree that Proper staff control will influence performance of building infrastructure projects in public secondary schools. The study found that respondents with a mean of 3.664 (SD=1.023) slightly agreed that Interpersonal relationship affects performance of building infrastructure projects in public secondary schools. The study found out that respondents with a mean of 3.782 (SD=0.856) slightly agreed that reputation of leaders influences performance of building infrastructure projects in public secondary schools. More findings showed that respondents with a mean of 2.451 (SD=0.982) disagreed with the statement that performance of building infrastructure projects in public secondary schools is greatly influenced by degree of delegation of responsibility. The study further established from the respondents who agreed with a mean of 4.348 (SD=1.223) that accountability of organization's managers influences performance of building infrastructure projects in public secondary schools. Finding is agreed upon by Frost (2010) aver that there is a strong relationship between accountability and service delivery. This is because accountability improves service delivery meaning that the goal of accountability is to improve performance, not to place blame and deliver punishments.

The study further conducted interviews to establish how leadership skills influence performance of the building projects findings were analyzed qualitatively and presented as follows:

'A total of 3 public works and 5 ministry of education officers agreed that good leadership skills are important in ensuring deliverables of the projects are achieved efficiently in projects. Four of the ministry of education officers interviewed stated that leaders in projects should have accountability and integrative skills to enable to lead other members effectively toward the desired objectives. Findings showed that five of the public officers noted further that every professional in projects should be engaged in planning and execution should have good leadership qualities.'

Findings from both interviews and questionnaire shows that leadership skills are important in management and performance of infrastructure building projects.

The third objective of the study was to establish whether management skills influence performance of building infrastructural projects in public secondary schools.

The study did sought responses from the question; do material management skills influence performance of building infrastructure projects in public secondary schools? The findings to the question were reported in table 6.

Question	Response	F(n=68)	%
Does material management skills influence performance of building infrastructure projects in public secondary schools	Yes	48	71
	No	20	29

Table 6: Material Management Skills and Performance

The findings in table 6 shows that majority of the respondents 48(71%) agreed that material management skills influence performance of building infrastructure projects in public secondary schools, while 20(29%) refused that it does not. Kanimozhi and Latha (2014), supports the finding further by stating that having a defined materials management as a process for planning, executing and controlling both field and office activities in construction.

Respondents were asked to state the extent to which they agree with statements relating to performance and material management skills findings were then reported in table 7.

Statements	F(n=68)	Mean	SD
Cost of material influences performance of building infrastructure projects in public secondary schools	68	4.643	0.897
Performance of building infrastructure projects in public secondary schools is influenced by how material is handled	68	4.234	1.220
The level of quality control influences the performance of building infrastructure projects in public secondary schools	68	4.456	0.795
Performance of building infrastructure projects in public secondary schools is influenced by the aesthetic value stakeholders get	68	3.673	0.982
The manner in which materials are warehoused influences performance of building infrastructure projects in public secondary schools	68	4.754	1.654

Table 7: Responses on Material Management's Skills and Performance

Findings in table 7 shows that respondents with a mean of 4.643 (SD=0.897) agreed that the cost of material influences performance of building infrastructure projects in public secondary schools. Findings also indicated that respondents with a mean of 4.234 (SD=1.220) agreed that performance of building infrastructure projects in public secondary schools is influenced by how material is handled. Findings showed further that respondents with a mean of 4.456 (SD=0.795) agree that the level of quality control influences the performance of building infrastructure projects in public secondary schools. Respondents with a mean of 3.673 (SD=0.982) further noted that performance of building infrastructure projects in public secondary schools is influenced by the aesthetic value stakeholders get. More findings further showed that the manner in which materials are warehoused influences performance of building infrastructure projects in public secondary schools that was agreed with respondents with a mean of 4.754 (SD=1.654). Vieira, Pasa, Borsa, Milan & Pandolfo (2011) from the findings concurs and opine that the significance attached to materials handling is a topic that frequently treated superficially by construction companies. He further states that provisions should be made to handle and store the materials adequately when they are received, special attention should also be given to the flow of materials once they are procured from suppliers

The study further did seek to establish through interviews the extent to which material management skills influence performance of building infrastructure projects in public secondary schools. Findings were reported as follows:

Findings showed that 6 of the educational officers stated that projects in schools should have proper ways of handling and storing materials to enhance project performance. Additionally, other four public officers agreed by stating that it is necessary for the planning teams in projects to have a policy and framework to manage materials used for constructing projects. A significant number of those interviewed agreed that quality of building materials is important in ensuring good structures are achieved in public secondary schools.'

The fourth objective was to establish whether construction capability influences performance of building infrastructural projects in public secondary schools.

The respondents were asked to state if staff managerial competence in construction influence performance of building infrastructure projects in public secondary schools. Table 8 shows the findings of the question.

Question	Response	F(n=68)	%
Does staff managerial competence in construction influence performance of building infrastructure projects in public secondary schools	Yes	46	68
	No	22	32

Table 8: Construction Capability and Performance of Building Infrastructural Projects

Findings in table 8 shows a total 46 (68%) agreed that staff managerial competence in construction influence performance of building infrastructure projects in public secondary schools, while 22 (32%) refuted that it does not. The study is supported by Fapohunda and Stephenson (2010) who carried a study on Optimal construction resources utilization: Reflections of site managers' attributes and found out that experience and construction knowledge of the staff in construction is paramount since it affects the performance of building construction

The study sought the extent to which respondents agree with statements linking construction capability and performance of building infrastructural projects. Findings were presented in table 9.

Statements	F(n=68)	Mean	SD
Contractors' decision-making skills influences performance of building infrastructure projects in public secondary schools	68	4.751	0.677
Performance of building infrastructure projects in public secondary schools is influenced by level of fundraising	68	4.402	1.100
Planning of building infrastructure influences performance of building infrastructure projects in public secondary schools	68	4.011	0.810
Supervisory skills influences performance of building infrastructure projects in public secondary schools	68	3.511	0.705
Interpretation of design matters since in influences performance of building infrastructure projects in public secondary schools	68	4.122	1.407

Table 9: Responses of Construction Capability and Performance of Building Infrastructural Projects

Table 9 findings showed that respondents with a mean of 4.751 (SD=4.751) agree that contractors' decision-making skills influences performance of building infrastructure projects in public secondary schools. Findings showed that respondents with a mean of 4.402 (SD=1.100) agreed that performance of building infrastructure projects in public secondary schools is influenced by level of fundraising. Respondents with a mean of 4.011 (SD=0.810) agreed that planning of building infrastructure influences performance of building infrastructure projects in public secondary school. Shaban (2008) support the study by stating that the most important factors affecting the performance of construction projects agreed by the owners, consultants and contractors were: average delay because of closures and materials shortage; availability of resources as planned through project duration; leadership skills for project manager; escalation of material prices; availability of personals with high experience and qualification; and quality of equipment and raw materials in project. Respondents with a mean of 3.511 (SD=0.705) slightly agreed that supervisory skills influences performance of building infrastructure projects in public secondary schools. Findings showed that respondents with a mean of 4.122 (SD=1.407) agreed that interpretation of design matters since in influences performance of building infrastructure projects in public secondary schools.

The study sought to establish qualitatively how contractual capability can influence performance of building infrastructure projects in public secondary schools. Findings were reported as follows:

'A significant number of respondents that included 6 ministry of education officers and 4 public officers did agree that it is important for management teams of projects to have technical knowledge on the nature of materials to be used for construction, in addition it important for project team to write good specifications and standards as part of good deliveries. A significant number of public officers further noted that technical skills should entail good monitoring and control mechanisms to ensure compliance is ensured.'

The respondents were asked to state how the performance of building infrastructure projects. Findings were summarized as table 10.

Statements	F(n=68)	Mean	SD
To what extent was the scope of the project achieved	68	3.681	0.412
To what extent was project time schedule observed	68	3.812	0.501
To what extent do you rate the cost of the project against its real value	68	3.674	0.621
At what level were stakeholders satisfied with project outcome	68	3.953	0.509
To what extent did the project achieve its expected quality	68	3.544	0.907

Table 10: Performance Building Infrastructural Projects

Table 10 showed respondents with a mean of 3.681 (SD=0.412) stated that they slightly think in a great extent that the scope of the project was achieved. Respondents with a mean of 3.812 (SD=0.501) think with a great extent that the project time schedule observed. Respondent's moderate extent agreed that rate the cost of the project against its real value. While respondents with a mean of 3.953 (SD=0.509) agreed at great extent that the stakeholders are satisfied with project outcome. Lastly the study found out that respondents with a mean of 3.544 (SD=0.907) slightly agreed that the project did achieve the expected quality.

4. Conclusion

According to the findings the study concludes that in building and construction should be given to procurement knowledge for a better performance. It is then important procurement knowledge to be used because it influences performance of building infrastructural projects in public secondary schools. Additionally, findings indicated that performance of building infrastructure projects in public secondary schools is greatly influenced by funding. Building infrastructure projects in public secondary schools is really not influenced by lead time in procurement, and specification of projects in all aspects is found to influence performance of building infrastructure projects in public secondary schools. The study concludes that leadership skills influence performance of building infrastructure projects. The study did further find out that proper staff control will influence performance of building infrastructure projects in public secondary schools. The study concludes further from respondent responses that performance of building infrastructure projects in

public secondary schools is not influenced by degree of delegation of responsibility. Accountability of organization's managers was found useful and influences performance of building infrastructure projects in public secondary schools. The study concluded that material management skills influence performance of building infrastructure projects in public secondary schools. The cost of material influences performance of building infrastructure projects in public secondary schools. It was established further that the level of quality control influences the performance of building infrastructure projects in public secondary schools. It was noted further from the findings that performance of building infrastructure projects in public secondary schools is influenced by the aesthetic value stakeholders get. More findings further showed that the manner in which materials are warehoused influences performance of building infrastructure projects in public secondary.

The study did conclude that staff managerial competence in construction influence performance of building infrastructure projects in public secondary schools. That performance of buildings is influenced by level of fundraising, contractors' decision-making skills, and planning of building infrastructure influences performance of building infrastructure projects in public secondary school. The study did establish that interpretation of design matters since in influences performance of building infrastructure projects in public secondary schools.

5. Recommendations

The study recommends the following to various stakeholders and individuals.

- Project management teams in infrastructure projects in public schools should ensure that teams are trained on construction capability, procurement skills, leadership skills and material management skills to ensure that performance of project is enhanced.
- Ministry of education and public works should formulate policies and frameworks that ensure that project management teams in projects constituted should have several skills related to procurement, leadership, construction capability and material management skills.
- Technical and executing staff needs to have knowledge and skills of handling materials used in building infrastructure project in secondary public schools.

6. References

- i. A. Aibinu, and G. O. Jagboro, (2000) "The effect of construction delays on project delivery in Nigeria construction industry". International journal of project management, vol. 112, pp. 45-55, 2002
- ii. Adebayo, S.O (2000): Improving Building Techniques "Proceedings of Workshops on Building Collapse: Causes, Prevention and Remedies. The Nigerian Institute of Builders, Lagos State.
- iii. Adedayo, A.O., Ojo, O. &Obamiro, J. K. (2006). Operations Research in Decision Analysis and Production Management. Pumark: Lagos
- iv. Adede, K. (2012). Impact of school infrastructure on provision of quality education in public secondary schools of Nyakachdistrict, Kenya. Unpublished M. Ed project, University of Nairobi
- v. Aibinu, A.A., Jagboro. G.O. (2002). The effects of construction delays on project delivery in Nigerian Construction Industry, International Journal of Project Management, Vol. 20, pp. 593-599.
- vi. Akintoye, A. (1995). Just in time Application and implication for building material management. Journal of construction management and economics
- vii. Altschuld W. J., (2010). Needs Assessment: An Overview. The Ohio State University, USA
- viii. Ayuba, P., Olagunju, R. E., &Akande, O. K. (2012). Failure and Collapse of Buildings in Nigeria: The role of professionals and other participants in the building industry. Inter-disciplinary Journal of Contemporary Research in business, 4(6), 1267-1272.
- ix. Ayudhya, B. I. N. (2011), Evaluation of Common Delay Causes of Construction. Journal of Civil Engineering and Architecture, Vol. 5, No. 1, pp. 1027-1034.
- x. Battelle, (2003). Decommissioning Nuclear Power Plants: Policies, Strategies and Costs. NEA, PARIS.
- xi. Cash, C.S. (1993). Building condition and student's achievement and behavior unpublished. Doctoral Dissertation, Blacksburg, VA: Virginia Polytechnic Institute and state university
- xii. Chai, S.C., Yusof A.M. (2013) Reclassifying Housing delivery Delay Classification. International Journal of Business Management, Vol. 8, No. 22, pp. 107-117.
- xiii. Chan, D. &Kumaraswamy, M. (1997) 'A Comparative Study of Causes of TimeOverruns in Hong Kong Construction Projects'. International Journal of Project Management, 15 (1), 55-63.
- xiv. Chan, F T S (2002). Design of material handling equipment selection system: an integration of expert system with analytic hierarchy process approach. Integrated Manufacturing Systems
- xv. Chism, N., Armstrong, G. (2010, September). Project delivery strategy: getting it right. KPMG International, pp.1-24.
- xvi. Dainty, A.R.J. (Ed) Procs 25th Annual ARCOM Conference, 7-9 September 2009, Nottingham, UK, Association of Researchers in Construction Management, 11-20
- xvii. Darren, O; Mark, T. and Christopher, D. (2012) How Industrial Contractors are Handling Skilled Labor Shortages in the United States. 48th Associated Schools of Construction (ASC) Annual International Conference Proceedings.

- xviii. Dimuna, K. O. (2010). Incessant Incidents of Building Collapse in Nigeria: A challenge to Stakeholders. *Global Journal of Research in Engineering*, 10(4), 75-84.
- xix. Donyavi, S. and Flanagan, R. (2009). The impact of effective material management on construction site performance for small and medium sized construction enterprises. In:
- xx. Eriksson, P. and Vennstrom, A. (2012), Effects of Procurement on Project Performance. A Survey of Swedish Construction Clients. Retrieved on 25th October, (2012)
- xxi. Fakere et al (2012). Assessment of Building Collapse in Nigeria: A Case of Naval Building, Abuja, Nigeria. *International Journal of Engineering and Technology*. Vol.2. No. 4
- xxii. Fakere, A. A., Fadairo, G., &Fakere, R. A. (2012). Assessment of building collapse in Nigeria: A Case of Naval Building, Abuja, Nigeria. *International Journal of Engineering and Technology*, 2(4), 584-591.
- xxiii. Fapohunda, J.A, Stephenson, P. (2010). Optimal construction resources utilization: Reflections of site managers' attributes. *Pacific Journal of Science and Technology*. Vol. 11, NO. 2, pp. 353-365.
- xxiv. Flick, U. (2015). *Introducing research methodology: A bigginers guide to doing research project*. New York, United States: Sage.
- xxv. Frost, M (2010) *Democracy, Governance and Economic Performance: Theory and Evidence*, Cambridge: MA, MIT Press.
- xxvi. Gay, L.R., Mills, G.E. and Airasan, P.W. (2009). *Educational Research: Competencies for Analysis and Applications (9th Edition)*. Upper Saddle River, New Jersey. Prentice Hall
- xxvii. Government of Kenya (2005): Ministry of Education Science and Technology sessional paper No.1 of 2005. Nairobi-Kenya. Government Printer guide. Queensland, Australia: John Wiley & Sons.
- xxviii. H.A. Odeyinka, and A. Yusuf, "The causes and effects of construction Delays on cost of housing project in Nigeria," *Journal of Financial Management and Property and Construction*. vol. 2, pp.31-41,1997.
- xxix. Huberman, A.M. and Miles, M.B. (1998), "Data management and analysis methods", in Denzin, N.K. and Lincon, Y.S. (Eds), *Collecting and Interpreting Qualitative Materials*, pp. 179-210.
- xxx. Jenkins M and Goetz T (2009), *Organizational Behaviour and Management*, 9th edn, McGraw-Hill, New York.
- xxxi. Jha, K.N., Iyer K.C. (2006). Critical Factors Affecting Quality Performance in Construction Projects. *Total Quality Management* Vol. 17, No. 9, pp. 1155–1170.
- xxxii. Johnson, J.L., Daily, C.M. & Ellstrand, A.E. (2006), 'Boards of directors: a review of research agenda', *Journal of Management*, vol. 22, no. 3, pp. 409-438. *Journal*, Vol. 50, No. 1: 17-28.
- xxxiii. Kanimozhi, G and Latha, P (2014). Material Management in Construction Industry. *Indian Journal of Applied research*, Vol. 4, Issue 4, 6-9.
- xxxiv. Kasim, N.B, Anumba, C.J & Dainty, A.R (2005). Improving materials management practices on fast-track construction projects. In: Khosrowshahi, F (Ed.), *SOAS, University of London. Association of Researchers in Construction Management*
- xxxv. Kothari, C. R. (2005). *Research Methodology: Techniques and methods*.3rdEdition. New Age International Publishers.
- xxxvi. Kothari, C.R., (2004). *Research Methods and Techniques*, 2nd Edition. New Age International Publishers.
- xxxvii. Kothari. C.R (2012). *Research Methodology*, 2nd Edition. New Delhi: New Age International Publishers.
- xxxviii. Koul, S. (1993). *R-Estimation of Parameters of Autoregressive*. Cornell University Library. Duke University Press
- xxxix. Koushki, P. A., Al-Rashid, K., Kartam, N. (2005). Delays and cost increases in the construction of private residential projects in Kuwait. *Construction Management and Economics* Vol.23, pp. 285–294.
- xl. Mahamid I (2013) „Common risks affecting time overrun in road construction projects in Palestine: Contractors" perspective", *Australasian Journal of Construction Economics and Building*, 13 (2) 45-53.
- xli. Mahamid, I. (2011) „Risk Matrix for Factors Affecting Time Delay in Road Construction Projects: Owners" Perspective", *Engineering, Construction and Architectural Management*, 8 (6), 609 – 617.
- xlii. McMiniminee, J.C, Shaftlin, S, Warne, T.R., Detmer, S.S., Lester, M.C., MroczscaG.F.Yew, C. (2009). *Best Practices in Project Management project delivery*. Scan Management Arora and Associates, P.C. Washington DC.
- xliii. Mojahed, S. (2005). *A project improvement system for effective management of construction projects*. (Master's thesis). Louisiana State University, Louisiana, USA.
- xliv. Mugenda, O. &. (2009). *Research methodology: qualitative and quantative approaches*. Nairobi: Acts publisher.
- xlv. Mugenda, O.M. &Mugenda, A.G. (1999). *Research Methods: Qualitative and Quantitative Approaches*. Acts Press. Nairobi.
- xlvi. Mugenda, O.M. &Mugenda, A.G. (2003). *Research Methods: Qualitative and Quantitative Approaches*. Nairobi. Africa Centre for Technology Studies
- xlvii. Müller, R., &Jugdev, K. (2012). Critical success factors in projects Pinto, Slevin, and Prescottthe elucidation of project success. *International Journal of Managing Projects in Business*, 5(4), 757-775.
- xlviii. Mulwa F. W. (2007). *Participatory monitoring and evaluation of community projects*. Community Based Project Monitoring, Qualitative Impact Assessment and People Friendly Evaluation Methods. Eldoret, Kenya: Zapf Chancery and P. Olivex Publishers.
- xlix. Munyoki. S.K (2014). *Factors influencing completion of construction projects; a case of construction projects in Nairobi Kenya*, UoN thesis, Nairobi Kenya

- I. Musyoka, L. (2013). Influence of provision of school physical infrastructure on students' performance in Kenya certificate of secondary education in Mwingi central district, Kenya, Unpublished M.Ed project, Kenyatta University
- ii. Neuman, W. &. (2012). Basic of social research: qualitative and quantative approaches. London, Unted Kingdom: Sage.
- lii. Niven, R. Balanced scorecard step-by step: Maximizing performance and maintaining results, John Wiley & Sons Inc. New York
- liiii. Obiegbu, M.E. (2009). Unique Roles of Professional Builders in the Society. Being a paper presented at the One day Seminar organized by the Rivers and Bayelsa States Chapter of the Nigerian Institute of Building held at Port-Harcourt, Nigeria on the 18th November
- liv. Obong'o, S. O. (2009): Implementation of performance contracting in Kenya, International Public Management Review, Vol 10 (2) pp 66 – 84.
- lv. Olatunji, A. A. (2010). Influences on construction project delivery time. (PhD. thesis). Nelson Mandela Metropolitan University, Estern Cape, South Africa.
- lvi. Omran, A., Abdalrahman, S., Pakir, A.H.K. (2012). Project Performance in Sudan Construction Industry: A Case Study, Academic Research Journals (India), Vol. 1, No. 1 pp. 55-78.
- lvii. Orodho (2003). Essentials of education and social sciences research methods. Nairobi. Masola publisher.
- lviii. Orodho, A. J. (2005). Statistics made user Friendly for Educational and Social Science Research. Nairobi: Masola Publisher.
- lix. Patil A.R, Smita V. Pataskar, S.V. (2013). Analyzing material management techniques on construction project. International Journal of Engineering and Innovative Technology (IJEIT) 3(4), 96-100
- lx. Robinson, Anumba, Carillo and Al-Ghassani (2005), "Measuring and classifying construction field rework: a pilot study". Department of Civil and Environmental Engineering, University of Alberta. Presented to the Construction Field Rework Committee, Construction Owners Association of Alberta
- lxi. Shan Y (2012), International Business, 2nd edn, Sage, Thousand Oaks, California.
- lxii. Teo, M. and Loosemore (2001.) M. "A theory of waste behaviour in the construction industry." Journal of Construction Management and Economics
- lxiii. Thornton, M.D. (1988). Construction Contract Durations. (Master's thesis). University of Florida, Florida, US
- lxiv. UNESCAP (2008), Editorial: corporate governance –The global state of the art', Corporate Governance: An International Review, vol. 7, no. 2, pp. 117-122
- lxv. UNESCO (2008). Gender and Education for all: the leap to Equality. Summary Report, UNESCO, Paris://www.uniesco.orga education/efa/summary en pdf
- lxvi. Vieira, G.B, Pasa, G.S, Borsa, M.O, Milan, G.S & Pandolfo, A. (2011) Material Management: A case study. Journal of Operations and Supply Chain Management, 4(2), pp. 19-30
- lxvii. Wambugu, D. M. (2013). Determinant of successful completion of rural electrification projects in Kenya: A case study of Rural Electrification Authority. International Journal of Social Sciences and Entrepreneurship. Vol.1, Issue 2, 2013, 1 (2), pp.549-560
- lxviii. Wilbisono, J. (2007). Dissenting concepts and Applications CSR (Corporate Social Responsibility), (Gresik-Indonesia: Fascho).
- lxix. Williamson, O. (2013), The Mechanisms of Governance, Oxford University Press, Oxford.