

# DETERMINANTS OF SUCCESSFUL IMPLEMENTATION OF INFRASTRUCTURAL PROJECTS IN SECONDARY SCHOOLS IN KENYA; CASE OF TRANSMARA WEST SUB COUNTY, NAROK COUNTY, KENYA

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**Abstract:** The increase transition of students from the primary school to secondary school following the provision of free primary education program that was launched in 2003 and the subsidized secondary school education launched in 2008 has put pressure on the existing physical infrastructures in most secondary schools creating need to increase infrastructure facilities in secondary schools. In most of the secondary school there is faulty projects implementation such as uncompleted buildings, schools without mandatory instructional materials, schools laboratories with little or no equipment among others. The purpose of this study is to establish the factor that influences implementation of school infrastructure projects in public secondary schools in Kenya case study of Trans Mara West Sub County Narok County. The objectives of this study are as follows: To determine the extent to which availability of funds influence successful implementation of infrastructural projects in public secondary schools in Kenya. To establish the extent to which stakeholders involvement in project cycle influence successful implementation of infrastructural projects in public secondary schools in Kenya. To determine the extent to which project governances influence successful implementation of infrastructural projects in public secondary schools in Kenya. To determine the extent to which project management skills and knowledge of school managers influence successful implementation of infrastructural projects in public secondary schools in Kenya. A descriptive survey research design was adopted for this study. Public secondary schools in Trans Mara West Sub County were considered as a representative of all secondary schools in Kenya. The study was limited to one sub county director of education (MOE) one sub county quality assurance and standards officer, 16 principals, 16 BOM chairpersons, 16 PTA chair persons 16 chairpersons on project implementation committee, 16 chiefs and 10 sponsors. Purposive research design was used to select 1 sub county director of education (MOE) one sub county quality assurance and standards officer while 16 principals 16 BOM chair persons, 16 PTA chair persons 16 Chairpersons on project implementation committee and simple Random sampling was used to select the chiefs. Questionnaires were used as main tool for data collection. Validity of the research questionnaires were ensured through judgment of experts or professionals in particular fields which helped in discovering questions content, corrections in wording and the sequencing of questions before actual study. The data collected were analyzed using statistical package for social science (SPSS) and descriptive statistic were used to present the results of the study.

**Keywords:** Determinants of Successful Implementation of Infrastructural Projects in Secondary Schools In Kenya.

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**ABBREVIATIONS AND ACRONYMS**

<b>BOM:</b>	Board of Management
<b>CDF:</b>	Constituency Development Fund
<b>GDP:</b>	Gross Domestic Product
<b>KESSP:</b>	Kenya Education Sector Support Programme
<b>NCRC:</b>	National Committee of the Red Cross
<b>OECD:</b>	Organization for Economic Cooperation
<b>SCDE:</b>	Sub County Director of Education
<b>SIIP:</b>	School Infrastructure Improvement Programme
<b>UK:</b>	United Kingdom
<b>SIC:</b>	School Infrastructure committee

**1. INTRODUCTION****Background of the study**

The education sector in Kenya is a key component in the realization of the Big Four and vision 2030 with a focus on reduction of illiteracy, increasing access to education, increasing transition rate from primary to secondary schools as well as raising the quality and relevance of education in Kenya (NCRC Brief 2016). Buildings, classrooms, laboratories, and equipment- education infrastructure - are crucial elements of learning environments in schools and universities. There is strong evidence that high-quality infrastructure facilitates better instruction, improves student outcomes, and reduces dropout rates, among other benefits (World Bank Group, 2019).

A growing body of research has found that school facilities can have a profound impact on both teacher and student outcomes. With respect to teachers, school facilities affect teacher recruitment, retention, commitment, and effort. With respect to students, school facilities affect health, behaviour, engagement, learning, and growth in achievement. Thus, researchers generally conclude that without adequate facilities and resources, it is extremely difficult to serve large numbers of children with complex needs.

A project is an exclusive undertaking with a beginning and a termination, undertaken to meet established objectives, with defined limitations of time, resources and quality (Baker & Baker, 1992). Construction project management is a professional service that uses specific project management technique that oversee the planning, design, and of course, the construction of a project from start to finish. Construction projects are usually high budget undertakings and are often involved in real estate, transportation infrastructure, industrial facilities and even military infrastructure. The construction industry is dynamic in nature due to the increasing uncertainties in technology, budgets, and development processes. Nowadays, building projects are becoming much more complex and difficult, and project teams are facing unprecedented changes (Nippin, 2015). For example, a recent study from the U.K. found that environmental and design elements of school infrastructure together explained 16 percent of variation in primary students' academic progress. This research shows that the design of education infrastructure affects learning through three interrelated factors: naturalness (e.g. light, air quality), stimulation (e.g. complexity, color),

And individualization, such as flexibility of the learning space. Although education policymakers are increasingly focusing on the quality of education and school learning environments, many countries use a fragmented or piecemeal approach to investing in their education infrastructure. In Europe, the construction of new secondary school is mainly done through Public-Private Partnership. In Romania, for example, decisions about education infrastructure investments have historically been made under an uncoordinated and decentralized model, driven by ad hoc needs and limited funding availability, rather than a strategic approach.

In The Kenya Education Sector Support Programme, through the School Infrastructure Improvement Programme (SIIP), the government used to provide direct funding to schools to carry out permanent infrastructural projects planned by

community members (KESSP, 2011). The MoE also provided manuals and trainings to guide communities in planning and managing these projects and to explain the roles and responsibilities of various school and community members. Currently, the policy is that government sends capitation, including that for infrastructural development, directly to schools based on the student population in that school. The Constituency development Fund may also chip in, depending on the needs of the school and the goodwill of the fund managers.

An effective school facility is responsive to the changing programs of educational delivery, and at a minimum should provide a physical environment that is comfortable, safe, secure, accessible, well illuminated, well ventilated, and aesthetically pleasing. The school facility consists of not only the physical structure and the variety of building systems, such as mechanical, plumbing, electrical and power, telecommunications, security, and fire suppression systems. The facility also includes furnishings, materials and supplies, equipment and information technology, as well as various aspects of the building grounds, namely, athletic fields, playgrounds, areas for outdoor learning, and vehicular access and parking.

## 2. LITERATURE REVIEW

A good school infrastructure (buildings in good shape) include an adequate number of well- organized classrooms, sufficient blackboards, tables, desks, benches, chairs, an adequate number of sanitation facilities, access to clean drinking water, electricity, ventilation and light, fire exits, first aid kits, medical assistance, canteen, sufficient recreation grounds, libraries, laboratories and computer facilities. School infrastructure is one of the core requirements for performance, besides curricula and teachers.

The school facility is much more than a passive container of the educational process: it is, rather, an integral component of the conditions of learning. The layout and design of a facility contributes to the *place experience* of students, educators, and community members. Depending on the quality of its design and management, the facility can contribute to a sense of ownership, safety and security, personalization and control, privacy as well as sociality, and spaciousness or crowdedness. When planning, designing, or managing the school facility, these facets of place experience should, when possible, be taken into consideration (Lackney&Picus, 2017).

The quality of education infrastructure, specifically its appropriate educational planning and design with a focus on child development, has been widely discussed in recent years. The Sustainable development Goals, which are defined by the United Nations and scope the development agenda for all countries in the world, require countries to “build and upgrade education facilities that are child, disability and gender sensitive, and to provide safe, non-violent, inclusive and effective learning environment for all” (Barret, 2019). The potential benefits of improving the spaces where education is provided can be sizeable, including energy savings, safer and healthier environments for children, and better learning outcomes.

School is a place where the average person spends a considerable part of his life and particularly his younger formative years. Studies have shown that environmental factor, such as lighting, thermal comfort, acoustics, aesthetics and indoor air quality in classrooms and the built environment generally may affect the health, performance and behavioral attitudes of pupils and teachers, learning outcomes and the whole educational process.

Overcrowded classrooms and schools have consistently been linked to increased levels of aggression in students (Ayers, 1999). Overcrowded classrooms are also associated with decreased levels of student engagement and, therefore, decreased levels of learning. Alternatively, classrooms with ample space are more conducive to providing appropriate learning environments for students and associated with increased student engagement and learning. Classroom space is particularly relevant with the current emphasis on 21<sup>st</sup> century learning such as ensuring students can work in teams, problem solve, and communicate effectively. Classrooms with adequate space to reconfigure seating arrangements facilitate the use of different teaching methods that are aligned to 21<sup>st</sup> century skills. Creating private study areas as well as smaller learning centres reduces visual and auditory interruptions, and is positively related to student development and achievement.

Project completion relies on, among other things, the availability of funds. Funds are required to buy materials, to pay for requisite fees and to pay personnel involved in the project. Many projects have stalled due to shortage of funds, which can be attributed to poor planning or unforeseen circumstances. School infrastructural requirements include classrooms, libraries, dining halls, dormitories/hostels, playgrounds and chapels. These are important for the comfort of the students and for creating a conducive environment for learning. Infrastructural development is quite expensive. At the first

International Conference on Sustainable Construction of the Conseil International Du Batiment in 1994, the goal of sustainable construction was defined as creating and operating a healthy built environment based on resource efficiency and ecological design. In the case of public secondary school infrastructure, the sources include parents/guardians, government capitation, and sponsors. Improving the quality of school facilities is an expensive undertaking. However, when the positive impacts of facility improvement on teachers and students are translated into monetary figures, the rewards of such investments far outstrip the cost of the investments.

The field of educational facilities infrastructure draws on many disciplines, starting from architectural design and ergonomics and proceeding to education policy and pedagogy (Dumont, & Benavides, 2010). There are persuasive arguments in favour of the contention that involving the whole range of stakeholders in all of the different stages of school planning has a positive effect on outcomes. These stakeholders include those that approve structures, suppliers of materials and equipment, architects, engineers, financiers and users. Specifically, those working in education need a better understanding of the value of better school facilities in improving educational quality and extending the reach of the education system. School development projects require the involvement and participation of all stakeholders (Nakhumicha, 2017). ..This helps in identifying the strategies they wish to use to improve their quality of education. Participation is seen as developmental, educative and integrative, and as a means of protecting freedom.

In European countries, most, if not all school projects will go through a life cycle which includes conception, feasibility, evaluation, authorization, implementation, completion, operation and termination. Feasibility comprises tests for technical, commercial, and financial viability. Technical studies and investment appraisal plans are made. Evaluation includes application for funds, stating risks, and options.

Authorization comprises of funds approvals relevant to school authorities, permits, conditions and project strategy (Albert, 2007). In the United States of America, completion of school projects requires the execution of planned activities which converts financial, human and physical resources into a product or service of value to the students, schools and all stakeholders involved (Cleveland, 2010)

Stakeholder politics in education determine the general direction and quality of any system of education. As stated by Apple (2001) stakeholder politics pose a great challenge to the various stakeholders, in mooted ways of being accommodated to participate in policy construction there was a shift in policy however in the way secondary education was to be organized. The government announced that it would only allow modest expansion in secondary education to correct the imbalance between boys and girls (Republic of Kenya Educational Sector Report 2009). The higher spending on education has been accompanied by, and almost certainly has contributed to, higher enrollment rates. Project leadership is an interesting and increasingly popular field of investigation. It is an area growing in relevance and importance as projects are being delivered in a more complex and uncertain environment one which, many would argue, requires more leadership (Krahn&Hartment2006)

More correctly referred to as impact analysis a key skill required toward the final stages of a project is the ability to analyse the impact of changes brought about by the project. Exactly the same as the well known 'ripple effect' you must never underestimate the knock-on changes and effect that a major project can bring about. Being able to analyse and then manage these is yet another skill you need to master.

Changes to the specification of a project after it has begun are all too easily overlooked and you will need to constantly revisit your impact analysis to incorporate them. Amongst other things any change to the specification could affect your previous analysis regarding legal, health, safety, and marketing or personnel issues. However, the ultimate reason for doing the analysis is – how the change will affect the end-date for the project? Project management is a complex task and the bigger the project, the more complex it becomes. You must be able to keep track of progress on the project from all the various sections of it that are on-going. This can be done on paper, but in all reality you need to learn and understand how to make the most out of one of the many pieces of project management software that are available. Using an IT based project management system will also help you to adjust timelines and priorities as the project develops.

Effective project planning underpins all project management. If you can't communicate, I'm sorry but you'll never become an effective and successful project manager. Any manager, but especially the project manager, has to understand that although you're charged with ensuring the successful completion of a project – you'll be dealing with a

multiplicity of people and companies that you have to bring together in order to achieve the projects aims and objectives. If you don't communicate effectively, either in speech, writing or presentations you won't provide the information that your workers need to fulfil their jobs; be that in sharing knowledge, discussing ideas, providing solutions or making an executive decision.

Even if you have a team of accountants looking after the day-to-day running of the projects finances, understanding how to use a budget yourself is another essential project management skill to possess. The three key stages to a budget are preparing it, writing it and monitoring it. Whilst your finance department may well be ostensibly charged with doing these things for you – as project manager you have the ultimate responsibility for the budget and need to be able to understand what you are being told about the budget. Unless your own background is in accounting you will feel obliged to accept what you're told, if you don't take the time to learn some basic budgeting skills. You will need these as at time you will need to know how to rationally and logically challenge budget over-runs that you become aware of as well as be able to sensibly monitor the budget as the project progresses.

Effective teamwork – will help you to manage your project most effectively. The essence of any good project manager is to be a good team leader and, if necessary, be a good team player. Whilst decisions will remain your responsibility, that's not to say that you shouldn't encourage input from others or be prepared to work with them to help them achieve their goals too. Furthermore, by building a culture of teamwork into all aspects of the project, you will engender high self-esteem within all of the workers, meaning that they feel personally involved in ensuring the success of the project.

This doesn't mean to say that you have to have a string of letters after your name as intelligence isn't something you can learn. However, intelligence is something you can improve on and develop, so the more you study the chances are the more you'll increase your intelligence. In the context of project management intelligence can be considered to be your ability to have a clear vision of all aspects of the project whilst at any one time being able to keenly focus onto a specific aspect of it. Put another way, just having the big picture will not help when you have a decision to make on a specific matter. You won't always have the time to spend hours researching and re-reading material in order to make the decision at the time it is needed.

It is almost inevitable that at times your job will be stressful, if not highly stressful. Being able to work calmly under such conditions is an absolute pre-requisite for a successful project manager. A key point to reducing your stress levels is your ability to move on from a setback. If something goes wrong or not according to plan, don't waste time worrying about whose fault it might have been or get involved in a cycle of what could have been different, that can come later in your project evaluation. Instead, move swiftly on to solving the problem or rectifying the situation.

Understanding the life-cycle for project management will help one to understand how to apply the key skill of time management to it. The time management and ability to organize yourself and others are vitally important. Time management is much more than simply allocating portions of time to certain jobs. You need to analyse exactly what it is you're spending your time on and how important are those tasks and portions of time to the successful completion of the project. For example, you could easily spend up to an hour a day just reading emails. This is a task you can delegate to your PA, get them to be the person that sorts the important from the not so important, telling you what needs dealing with immediate and what can be left until later. That hour you've saved – you can use inspecting a part of the project checking on progress or quality etc. You should apply this time management philosophy to most things you do; do I need to attend that meeting or can I delegate someone else? Remember, you are the project manager; you are primarily there to do the strategic planning, overall monitoring and be creative and innovative in solving problems – not micro-manage everything.

### **3. RESEARCH METHODOLOGY**

#### **Research Design**

This study uses descriptive survey research design. According to Orodho (2005), a descriptive survey is a method of collecting information by administering a questionnaire to a sample of individuals to collect information about people's attitudes, opinions, habits or any of a variety of education or social issues. A descriptive survey is concerned with gathering facts rather than manipulating the independent variables. In this study, the survey will be on actors affecting timely completion of secondary infrastructural projects.

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### Data Collection Instrument

In collecting the required data for the study, the researcher used questionnaires, observation schedules, in-depth interviews and document analysis guide.

### Questionnaires

The researcher administers the questionnaires to principals BOM chair persons, Parents Teaches Association chair persons, School Infrastructure C committee, and area administrative chiefs.

### Principals' Questionnaires

This questionnaire comprise of section A and B. Section A has demographic information of the head teachers' background information; age, gender, academic qualifications and experiences. Section B of the questionnaires has both open -ended and close -ended items. The close ended items are suitable for the reader to get relevant responses on the principals' management challenges in the schools.

### In-depth interview

Interview guides provides flexibility and the ability to probe and clarify responses. They note non- verbal as well as verbal behavior. They provide high responses rates and are adaptable (McMillan & Schumacher, 2009). They were used in the study for they allow direct interaction with respondents and the collection of in- depth information that the questionnaires may not gather. Education officers were involved in in-depth interviews and questionnaires schedules. Therefore, data was collected from the sub-county Education officers.

### Document analysis guide

This is a critical examination of public or private recorded information related to the issue under investigation. It is a systematic assessment of communication for purposes of identifying the characteristics of the message (Ogulla, 1998). This technique was used to obtain unobtrusive information and save time.

### Observation schedule

Observational procedures can record naturally occurring behavior and avoid some of the disadvantages associated with the questionnaires and interviews. Even though the observation schedules are costly, time- consuming and usually not anonymous they were used.

### Validity of the Instrumentation

Validity is a measure of how well a test measure what it is supposed to measure (Kombo and Tromp (2006). The validity of a research instruments was established by getting the opinions, advice and guidance of two experts in the department of Distance Learning, University of Nairobi. They assessed the viability and credibility of the instruments to recommend them for use in the research. The area of content and criterion related validity was established and their suggestions were incorporated in the final copies before the instruments used for gathering data for the study. In this research validity of the questionnaires were ensured through judgment of experts.

### Reliability of Instruments

Reliability refers to consistence of measurement; the extent to which measures are free from error (McMillan & Schumacher, 2009). The researcher used test-retest method to determine the reliability of the instruments. The researcher used 10% of total number of schools for testing reliability of the instruments.

The questionnaires administered to respondents and after duration of two weeks, the researcher administered the questionnaires to the same respondents. The first and second scores obtained from each respondent were recorded separately. Pearson's product moment formula was used to compute the correlation coefficient of the two tests. Reliability of the instruments was accepted if it was above 0.75 which is considered as the minimum acceptable co-efficient for any educational research (Orodho, 2005).

**Data Collection Procedures**

The researcher sought permission to conduct research in the sub county by obtaining research permit from the Ministry of Education Science and Technology. An endorsement from the University authorizing the research was obtained. The researcher then visits the Trans Mara Sub-County Education Office to inform the Sub-County Education Director of the intended research. The researcher then visited the sampled schools to inform the head teachers about the study and to make arrangements for administering questionnaires to the head teachers and teachers between July and August, 2016. The researcher also placed a request to the head teachers to avail class and teachers’ attendance registers, log books and disciplinary records to get information on the head teachers’ management challenges.

Finally, the researcher administered the questionnaires to the head teachers and teachers. Interview schedule was also carried out while taping the responses of the respondent with his/her consent. Then the responses were analyzed later using the qualitative methods. During the visits to the schools, the researcher observed the daily conducted activities in the school to get a glimpse of the principals and teachers management challenges. Confidentiality were ensured by ensuring that all information collected during the study was kept confidential and was not be available to anyone who is not directly involved in the study.

**Data Analysis method**

The researcher used descriptive statistics technique in analyzing the quantitative data and presented it in the form of frequencies, percentages and means. The qualitative data collected from the in- depth interview schedule were analyzed by thematic analysis according to themes and sub themes, categories and sub categories that were emerged from the data.

**4. DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF THE STUDY**

**Availability of funds and implementation of infrastructural projects**

Respondents were asked to indicate whether the funds are usually availed in promptly as needed or availed in good time. The responses were as presented in table 1

**Table 1: Availability of funds and implementation of infrastructural projects**

Frequency	Percentage	
Yes	8	90.79
No	69	90.79
<b>Total</b>	<b>76</b>	<b>100.0</b>

**Source: Lenah; (2019)**

Figure 4.6 above indicates that in most cases the availability of funds is a problem, 69 principals which represent a percentage of 90.79% indicate that the availability of funds is not easily available due to the several projects that are carried out by the County government only 8 principals representing 9.21% indicate that the availability of funds to some schools within the Transmara West sub-County, Narok County.

**Stakeholder Involvement and implementation of infrastructural projects**

In stakeholder involvement, the respondents were asked to indicate their level of agreement using a five point Likert scale (i.e. 5 = strongly agree, 4 = agree, 3 = uncertain, 2 = disagree, and 1 = strongly disagree) to specify their perceptions on 3 major areas in management of the project constraints.

**Table 2: stakeholder involvement and implementation of infrastructural projects**

Stakeholder	SA%	A%	U%	D%	SD%
BOG	17.95	35.90	10.26	20.51	15.38
PTA	7.69	38.46	15.38	23.08	10.26
Committee members	20.51	30.76	17.95	15.38	15.38
Directors of education	20.51	30.76	23.08	7.69	10.26

**Effectiveness of stakeholders' participation on implementation of projects**

When asked on the effectiveness of stakeholders' participation, the responses were as presented in table 3.

**Table 3: Effectiveness of stakeholders' participation on implementation of projects**

Frequency	Percentage	
Effective	33	43.42
Very effective	25	32.89
Ineffective	12	15.79
Very ineffective	6	7.9
<b>Total</b>	<b>76</b>	<b>100</b>

Source: Lenah; (2019)

Out of the total 76 respondents, 33 of them indicated that stakeholder participation is effective, 25 of them indicated that is very effective, 12 indicated that it is ineffective and only 6 indicated that it is very ineffective.

**Political Governance**

Also, according to the respondents, political influence on school leadership and project financing by politicians were also considered as major stakeholder related challenges that affected the successful implementation of the school projects. It was also observed that some donors to the some school projects had other interests other than ensuring successful implementation of the school projects.

**Project Management Skills**

Respondents were asked about their management skill and any other training in management especially of projects. Their responses were as indicated below. The first objective of the study was to establish the influence of the management skills on the effective implementation of projects. To achieve this, the respondents were asked to rank the extent to which they agreed or disagreed with the following statements using the Likert scale of 5-1 of: 5.Strongly agreed (SA); 4 Agree 3 neither Agree nor Disagree (NAD); 2. Disagree (D); I. Strongly Disagree (SD).

**Table 4: Management skills**

Statement	Frequency (n) Responses (%)					TOTAL	MEAN
	SA	A	NAD	D	SD		
Projects are well planned before execution	5 6.58%	51 67.10%	5 6.58%	12 15.79	3 3.94%	76 100%	3.58
Managers consult to customers and understand their requirements and expectations of projects Outcomes	3 3.94%	28 36.84%	14 18.42%	26 34.21%	5 6.58%	76 100%	2.98
There is planning for time ,budget materials and human resources throughout the project cycle	0 0%	22 28.94%	16 21.05%	28 36.84%	10 13.16%	76 100%	2.68
There IS sound communication system throughout the project execution period.	1 1.31%	14 18.42%	15 19.74%	31 40.79%	5 6.6%	76 100%	2.78
Project leadership skills are necessary for effective projects teams before commencement	2 2.63%	31 40.79%	7 9.2%	32 42.10%	4 5.3%	76 100%	2.91

Source: (Lennah, 2019)



The findings on table 4 Shows the following, 67.10% of the respondents agreed that projects are well planned before execution, meaning that most school projects are well planned and all technicalities concerning the implementation of the projects are taken into consideration, whereas 15.79% disagreed and 6.58% strongly disagreed. 15.79% disagreed and 6.58% strongly disagreed there is planning for time ,budget materials and human resources throughout the project cycle ,meaning that human labour force in judge of the construction of the projects don't have the required knowledge and skills ,this can be due to the qualified personnel demand a lot for the construction of the projects. This leads to the projects not being effectively implemented. 36.84% of the respondents do agree that managers consult to customers and understand their requirements and expectations of projects outcomes, this will influence the type and standard of projects to be implemented, while 3.94% do strongly disagree. 34.21% of the respondents states that there is sound communication system throughout the project execution period this greatly influences effective implementation of projects while 6.58% of the respondents do strongly disagree. 40.79% of the respondents agree that Project leadership skills are necessary for effective projects teams before commencement this will influence how to coordinate project completion while 42.10% of the respondents strongly disagree.

### Hypothesis test

Hypothesis testing is the use of statistical approach to prove whether a given hypothesis is true. The above analysis of data was represented in the form of tables. The results are shown clearly regarding each factor that was investigated to determine how each factor influenced that rate of implementation of development projects. The hypothesis sought to test for availability of funds, stakeholder's involvement, project governance and project completion and management skills. The hypothesis was conducted on the basis of table representation.

**1. HO:** Availability of funds influences the successful implementation of infrastructural projects in public secondary schools in Transmara, Narok County, Kenya.

From the result collected, the hypothesis availability of funds influences the rate of implementation of infrastructure projects by County government of Narok County, availability of funds influences rate of implementation to great extent as seen above the project product meets projects. Objective and user descriptions to a great extent with a percentage of 90.79% response. Thus we can nullify the hypothesis that the availability of funds influences the rate of implementation of successful of projects.

**2. HO:** Stakeholders involvement influences the successful implementation of projects in public secondary schools in Transmara, Narok County, Kenya.

From the result collected, the stakeholders' involvement influences the rate of implementation of projects by County government of Narok County. Stakeholders' involvement influences rate of implementation projects with moderate extent to great. Thus we nullify this hypothesis.

**3. HO:** Project governance and completion influences the successful implementation of projects in public secondary schools in Transmara, Narok County, Kenya.

Project governance and completion affects the rate of successful implementation of projects. This is the illustrated by the results which shows that the extent to which project governance and completion influences the successful implementation the rate of implementation. Thus we nullify this hypothesis.

**4.** Management skills influence the successful implementation of projects in public secondary schools in Transmara, Narok County, Kenya.

Management skills affect the rate of successful implementation of projects. Objective and user descriptions to a great extent with a percentage of 67.10% response. Thus we can nullify the hypothesis that the availability of funds influences the rate of implementation of successful of projects. Thus we nullify this hypothesis.

## 5. SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION, RECOMMENDATIONS AND SUUGESTIONS FOR FURTHER STUDY

### 5.1 Introduction

This chapter contains a summary of the major findings on the determinants of successful implementation of infrastructural projects in secondary schools in Kenya; case of Transmara west sub County, Narok County, Kenya. It further covers the conclusions, recommendations and for research for further study.

### Summary of major findings of the study

The study revealed that majority of the projects implemented in public school are unsuccessful. The case is as a result of many factors which include unavailability of funds of the projects, lack of proper planning of the project, the managers' lack of training in project management and failure to involve the stakeholder, committee members, chiefs and sponsors, quality assurances standards officers, PTA members and BOM chairpersons all through the project's life cycle. Project implementation in secondary schools fails to acknowledge all these factors.

The research employed the use of questionnaires to collect data for the purpose of achieving the objective of the study. The general objective was to investigate the determinants influencing successful implementation of infrastructural projects in public secondary schools in Transmara West Narok County in, Kenya. The specific objectives of was to determine the extent to which availability of funds influence successful implementation of infrastructural projects in public secondary schools in Kenya, was to establish the extent to which stakeholders involvement in project cycle influence successful implementation of infrastructural projects in public secondary schools in Kenya, was to determine the extent to which project governance influence successful implementation of infrastructural projects in public secondary schools in Kenya, was to determine the extent to which project management skills and knowledge of school managers influence successful implementation of infrastructural projects in public secondary schools in Kenya. The findings indicate that most of respondents who were principals of public secondary school have not received any training in projects management, 78.94% admitted to not having any training in project management. However the same finding indicate that most of them have received training in general management hence apply the knowledge to manage the projects implemented in their work station, also planning influences the successful implementation of projects in Public Secondary Schools. Most respondents indicated that planning meeting were held where project plans was drawn with timelines set 68.43% of the respondents indicated that timelines were not met;. It also resulted in instances of unsuccessfully implemented projects since it means at times changing the scope of the project due to inadequacy of fund in time the stakeholders' participation influences the successful implementation of projects in public secondary schools. The findings indicated the 84% of the respondents indicated that the stakeholders were the BOG/PTA was involved in they helped the principal sometime in raising funds for the project, foresee the implementation process, sourcing materials and also supervising the project's progress.

### Stakeholder involvement

The involvement is often done at different stages and therefore, it is important that the implementers consider comprehensive involvement throughout the project stages. The results indicated that stakeholders were often involved in the identification and management of projects in public schools, although some of the stakeholders were not involve throughout the process. Similarly, the stakeholders indicated that they were involved at different project stages. The involvement was considered as a proper factor in ensuring that there was complete understanding of the project objectives and minimized the incidence of project opposition and resistance. The findings also indicated the existence of a positive correlation between stakeholder involvement and effectiveness of the project implementation. The findings implied that stakeholders should be involved in the identification of the projects since their involvement grants them sufficient understanding on their roles and contributions in the projects. Aside, there is need for adequate consultation throughout the project activities, whereby the input given is essential in enhancing the implementation process. The involvement of stakeholders is vital in influencing and enhancing their satisfaction on the outcomes of the projects. The community, being a key player in the projects makes useful contributions towards the implementation of the projects, which ranges from capital contribution and necessary inputs required in the decision and policy making. Therefore, there is need to ensure the comprehensive involvement of all stakeholders throughout the project activities to enhance the outcomes of the public projects.

### Availability of Funds

The findings revealed that there was a positive relationship between availability of funds and the implementation of projects. Accordingly there are major gaps in the availability and the accessibility of funds. The study confirmed that the funds allocated are often insufficient and may not be enough to finance all the project activities. The study outlined the availability of funds as a primary factor in determining project success. The findings revealed that the funds allocated to the projects are not often sufficient in meeting the project requirements. The inadequacy of funds was highlighted as a

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major factor undermining the implementation of the projects. This implies that the project implementers may be unable to achieve the project objectives due to scarce financial resources. Aside, the funds allotted were often used for the required project activities. Aside, there is significant uncertainty on the compensation of stakeholders and on the distribution of the funds for various projects in the region. These could be due to the inaccessibility of the financial information and financing records for the public projects. The inferential analysis revealed the presence of a strong positive relationship between the availability of funds and effective project implementation. These findings affirm that availability of funds is crucial in influencing the effectiveness of the implementation process for the public projects.

**Conclusions of the study**

The study established that project governance, project management, stakeholder involvement and availability of funds positively affect the implementation of infrastructure of projects in public schools. Therefore, the study concludes that there is need to create formalized, rationalized, and comprehensive training programs for all those involved in the implementation of public projects. The training should be done at all the project stages to ensure that there is complete awareness of the project objectives for all the participants and to minimize the resistance and opposition to the projects. In addition, there is need to ensure the complete involvement of stakeholders at all the project stages and activities. This way, the project objectives are likely to be achieved and the cooperation between the stakeholders is useful in maintaining a smooth implementation process. Collaboration between the stakeholders is also essential in enhancing the decision making process since the stakeholders are given opportunities to give their inputs and feedback for improved policy and decision outcomes. Similarly, there is need to create effective funding processes to ensure the availability of adequate funds for the success of the project activities. Since lack of sufficient funds was highlighted as one of the main challenges to effective implementation, the funding and budgeting agencies should create frameworks that ensure availability of adequate funds to maximize the success of the projects. Aside, it is important that more awareness is created to ensure the access to knowledge on the regulations guiding the implementation of public projects. The regulations are structured to ensure that they enhance accountability and transparency of the implementers. It is also important that the stakeholders and the general community are empowered to ensure that they can give their feedback and complaints to enhance the outcomes of the implementation and the projects.

**Recommendations**

The study recommends the following measures:

The findings of the study have shown that project management skills influences effective project implementation, then management should be trained on the financial management skills, also there should be regular auditing of the project funds. The study recommends that stakeholder interest which may be in conflict the projects should be identified before the project begins, because the individual interest may influence who to be given the contract where to source the construction materials, and what type of the project to be implemented. The study recommends that human labour force in judge of the construction of the projects should be required have knowledge and skills required for effective project implementation. If all these recommendations are implemented appropriately with other supporting tools like Annual Work Plan and Strategic Plan as well as setting of performance standards benchmarked against the best national standards, the effective project implementation will improve thereby contributing to the achievement of the project.

**Suggestions for Further Research of the study**

The study recommends for further research to be conducted on the effective project implementation in other sectors determinants influencing successful implementation of infrastructural projects in public secondary schools in Kenya. This will assist in the improvement of service delivery towards the realization of vision 2030 development goal. Investigating the nature and quality of project, the nature of stakeholders and committee to be used. This will help in releasing the real a quality of projects completed so as to determine the extent of realizing the objectives of the study. And also the study indicates mismanagement of the funds should be avoided in order to facilitate the completion of the projects, schools with needy cases should be considered first in the allocation of the funds and there should be a body to audit the allocation of the funds for the accountability purposes.

**REFERENCES**

- [1] Ayers, P.D. (1999). "Exploring the relationship between high school facilities and Achievement of high school students in Georgia." Un-published doctoral dissertation, University of Georgia, Athens, GA
- [2] Barret, P et al (2019). The Impact of School Infrastructure on Learning. International Development in Focus, World Bank.
- [3] Bhattacharia, A., Romani, M., & Stern, N (2012). Infrastructure for Development: Meeting the Challenge. Centre for Climate Change Economics and Policy.
- [4] Cleland, (2010). Current Risk Management Application in Turkish Construction Industry. Unpublished Master Thesis, Gaziantep University.
- [5] Cuesta, A., Glewwe, P., & Krause, B. (2015). School Infrastructure and Educational Outcome: A Literature Review with Special Reference to Latin America.
- [6] Dumont, H. D & Benavides, F. (2010). The Nature of Learning: Using Research to Inspire Practice. Education, Research and Innovation. Paris. OECD Publishing.
- [7] Government of Kenya (2013). Basic Education Act. Nairobi: Government Printer KESSP (2011). Kenya's KESSP School Infrastructure Improvement Program: An Assessment of Roles and Responsibilities
- [8] Krahn, J. & Hartment, F. (2006). Effective project leadership: a combination of project manager skills and competencies in context. Paper presented at PMI® Research Conference: New Directions in Project Management, Montréal, Québec, Canada. Newtown Square, PA: Project Management Institute.
- [9] Lackney, J. A. & Picus, L. O. (2017). Maintenance and Modernization of School Facilities
- [10] Lahon, S. (2015). A Study of Infrastructure Facilities in Secondary Schools of Asam State with Special Reference to Sivagagar District. Vol No 4 Issue 8
- [11] Langat, D K (2015). Factors Influencing Completion of Construction Projects in Public Secondary Schools in Bomet East Sub-County, Bomet County, Kenya.
- [12] Maina, S. N (2018). Factors Influencing Provision of Quality Education in Newly Established Secondary Schools in Mathira Constituency. Unpublished M.Ed Thesis, Karatina University.
- [13] Misiani, D. O. (2015). Factors Affecting Effective Implementation of Projects in Public Secondary Schools in Nyamira District. Unpublished M.Ed Thesis, University of Nairobi
- [14] Mochama, R A (2017) Influence of the Development of Infrastructural Projects in Public Secondary Schools in Kenya: a Case of Bobasi Sub-County, Kisii County.
- [15] Murithi, S. H., Makokha, E. N., & Otieno, C. (2017). Factors Affecting Timely Completion of Public Construction Projects in Trans-Nzoia County. International Journal of Scientific and Research Publications, Vol 7, Issue 4, April 2017.
- [16] FM mwangi (2015). Influencing implementation of projects in secondary schools in mathira constituency nyeri county Factors Affecting Implementation of Projects in Public \ University of Nairobi
- [17] Mwereria C K (2015). Factors Affecting Completion of Construction Projects in Secondary Schools: A Case of Imenti North Sub-County, Meru County Kenya.
- [18] Nakhumicha, W. S. (2017). Factors Influencing Completion of Development Projects: A Case of CDF Projects in Imenti North Sub County, Meru County, Kenya. International Academic Journal of Information Sciences and Project Management Vol 2 Issue 1 pp390-400
- [19] NCRC (2016). Brief on Arson Crisis in Secondary Schools in Kenya).

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Vol. 6, Issue 6, pp: (142-154), Month: November - December 2019, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

- [20] Newman A. B. (2017). The Impacts of Free Secondary Education: Evidence From Kenya.
- [21] Nippin, J. B. (2015). Factors Affecting Success of Construction Project. IOSR Journal of Mechanical and Civil Engineering Vol 12Mar-Apr 2017 pp 17-26.
- [22] Opong, D. D; Chan, A. P. C.; and Dansoh, A. (2017). A review of Stakeholder Management Performance Attributes in Construction Projects. International Journal of Project management No 35 pp1037-1051
- [23] Zepatou, V; Loizidou, M.; Chaloulakou, A.; and Spyrelis, N. (2016). School Facilities and Sustainability-Related Concepts: A Study of Hellenic Secondary School Principals, Teachers, Pupils and Parents' Responses World Bank, (2007). Recruiting, Retaining, and Retraining Secondary School.