

**INSTITUTIONAL FACTORS INFLUENCING COMPLETION OF CONSTRUCTION
PROJECTS IN PUBLIC DAY SECONDARY SCHOOLS IN KENYA. A CASE OF
IMENTI NORTH SUBCOUNTY, MERU COUNTY**

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DECLARATION

This research project report is my original work and has not been presented for examination in any other university.

Signature

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This research project report has been submitted for examination with my approval as the University supervisor.

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DEDICATION

I dedicate this research project report to my parents; My dad M'rwito and my mum Agnes. To my brothers Zakayo and Martin, My sisters Dorcas, Lillian and Vella and all other my close relatives and friends who have stood by me through this entire period and remained as my key motivation and drive throughout the period of writing this report. Let them all know what is conceived in mind is achievable and we can do all things through Christ who strengthens us (Philippians 4:13)

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ABBREVIATIONS AND ACRONYMS

BOM - Board of Management

CDE – County Director of Education

CDF - Constituency Development Fund

DEO - District Education Officer

DQASO - District Quality Assurance and Standards Officer

ESSP - Education Sector Support Programme

IPMA - International Project Management Association

MOE - Ministry of Education

NCST- National council of science and technology

PMBOK - Project Management Body of Knowledge

PMI - Project Management Institute

SDG - Sustainable Development Goal

ABSTRACT

The phenomenon of having incomplete/stalled buildings in most of the government ministries has become very common in recent years. The most cases of this have been experienced in learning institutions. The purpose of this study was to investigate on institutional factors influencing the completion of construction projects in public day secondary schools in Imenti north sub-county. The researcher used a descriptive survey design to establish the institutional factors influencing completion of construction project in public day secondary schools. The target population for the study was consisting of all the 43 principals, 43 accountants/bursars and 43 BOM chairpersons from all the secondary schools in Imenti North Sub County. It also included the DEO, DQASO and the CDE of Meru county. The study adopted a census approach where 90 respondents out of the 132 from the target population were selected. This was including 29 principals, 29 BOM chairpersons, 29 accountants/bursars, DEO, DQASO and the CDE since the study was focused only on public day schools. Census approach is appropriate where the target population is small and all can be easily contacted as was the case for this study. Data was collected by the use of two questionnaires. The data was analyzed and interpreted both qualitatively and quantitatively in the light of the research objectives. Analysis of data was conducted with the aid of the Statistical Package for Social Sciences (SPSS). Qualitative statistical techniques was used to describe and summarize the data. The results was then presented and interpreted in the form of descriptive statistics; frequencies, percentages, means, mode and correlation. The findings were represented in tables and pie charts. From the study, it was found that the institutional factors investigated had an influence on the completion of construction projects in public day secondary schools in Imenti North sub county to different extents. These were; the school management, budget allocation, project planning and monitoring and evaluation. The findings showed that the school management and budget allocation were the key factors that affected completion of projects to a large extent. It was concluded that for timely completion of projects, there was to be appropriate school management skills, availability and adequate finances, good project planning skills and appropriate monitoring and evaluation skills. Absence of all these factors led to incompleteness of projects in schools. Among the few recommendations from the study were, the government to ensure qualified school principals and avail adequate finances for the school projects.

CHAPTER ONE: INTRODUCTION

1.1 Background to the study

The 2030 Agenda for Sustainable Development is an ambitious, aspirational and universal agenda to wipe out poverty through sustainable development by 2030. When it adopted the new Agenda in September 2015, the international community recognized that education was essential for the success of all 17 of its goals. Ambitions for education are essentially captured in Sustainable Development Goal 4 which aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” by 2030. Through the Incheon Declaration adopted at the World Education Forum in May 2015, UNESCO, as the United Nations’ specialized agency for education, was entrusted to lead and coordinate the Education 2030 agenda with its partners. The roadmap to achieve the ten targets of the education goal is the Education 2030 Framework for Action, adopted in November 2015, which provides guidance to governments and partners on how to turn commitments into action. Education 2030, founded on the principle of the Right to Education, goes beyond past attempts to ensure access to basic education, as set out in the Education for All goals and the education-related Millennium Development Goal 2 of 2000-2015.

In determining whether a project is a success or a failure several authors have had varied views. It is believed to be a very complex analysis (Chan et al., 2002). Time, cost and quality have been accepted as measures of project success for a long time. It is only in recent years that other measures like customer satisfaction, occupational health and safety (OHS) and environmental conservation have been included as measures of project success among others. A project is considered successful if it is completed on time, at cost and according to the specifications of the customer.

Diallo and Thuiller (2005) observed that time; cost and quality are the management measures of success. Project performance in the management functions of time, quality and cost are currently used to measure project success (Moura et al., 2007). Time has always been at the centre of evaluation of project success because it has a direct effect on cost and owner satisfaction. Since time is an important parameter of measuring project success, an assessment of delays in project implementation indicates the performance of projects.

Delays in project implementation are recognized worldwide as a characteristic of construction projects (Sambasivan and Soon, 2006). Many projects experience extensive delays and therefore exceed the time and cost estimated at the planning stage (Odeh and Battaineh, 2002). Most construction projects in Portugal do not meet the main functions of time and cost.

Vidalis and Najafi (2002), writing on the situation in Florida observed that cost and time overruns are common in construction projects and indeed identified implementation of projects on time and within budget as a chronic problem in the Florida construction industry. Chan et al,(2008), in their study of the determinants of successful build-operate projects in Hong Kong advocated that project is successful if it is achieved on budget, on schedule, conforms to users expectation, meets specifications, quality workmanship and minimize construction aggravation.

In Saudi Arabia, Al Haadir and Panuwatwanich, (2011), concluded that the top management has the most significant role in supporting the successful implementation of safety programs in construction projects. They added that having established clear goals and target and teams of staff with the right attitude towards construction safety, will help control the rising cost of accidents and reduce project delays due to the accidents.

In a study conducted in Egypt, Belassi and Tukel (1996) categorized project success critical factors as those related to the project itself, manager's performance, team members as well as external environment. They concluded managers' managerial skills, team members' commitment and their technical background' project attributes and environmental factors are as viable and can be as critical as the organizational factors, although the criticality of these factors varies between industries. They added that environmental factors take the lead in construction projects.

Previous studies in Kenya have provided evidence of the existence of a problem of ineffective project implementation within the public domain. A case in point is the Kenya Civil Aviation Authority which failed to realize one of its key strategic objectives which was to be realized through the rehabilitation of a swimming pool within a certain timeline. The project was not achieved within the contractual period and the contractor blamed it on delayed payments and unforeseen but necessary works associated with the project, (KENAO 2010).

In Kenya, with introduction of free secondary education, schools get some funding from the government while parents are required to meet various other costs such as school development

projects and boarding fees (Republic of Kenya, 2005). Head teachers play a major role in the management of all school financial activities, which involve the disbursement of money. The money is obtained through various sources such as fees.

There are school development projects that are initiated with little or no consultation between school administrators and school community. Some schools have been fundraising for school buildings or school buses in perpetuity. Mechanisms for financial oversight over such funds are minimal and thus the head teacher is able to manipulate the money collected under the pretext of paying for bills resulting from delays in disbursements from the ministry (World Bank, 2007). There are cases of ‘school capture’ where some suppliers have monopolized services in some institutions. The accounts in some schools are rarely monitored. Resources in those accounts are open to over-withdrawals due to overpriced services and goods. This issue of undisclosed income is also witnessed in provincial and district schools that are officially registered as either two or three streamed schools yet they actually have four streams, (World Bank, 2007).

Free primary education and recently introduced Free Day Secondary Education (FDSE) policy aims at reducing the cost burden on parents through provision of state subsidy to schools for enrolled students (World Bank, 2007). Integrity concerns have emerged regarding the manner in which schools manage resources allocated from the ministry or generated internally. Allocations to schools are based on the enrolled population of students. The inequality alluded to the allocation criteria applied under FPE also extends to the FDSE. Thus, schools that are able to generate significant internal revenue through agriculture, hiring of school facilities (buses, school halls or compounds) for social functions end up receiving more in net terms than schools that are relatively ‘poorer’. Such additional income has therefore become a key vulnerable area for corruption in schools since accountability mechanisms on usage of such revenue are rather weak.

It is in respect to the foregoing observations that the researcher intends to examine the institutional factors that influence implementation of construction projects in public day secondary schools in Imenti North sub-county of Meru County, Kenya.

1.2 Statement of the problem

Kenya Vision 2030 is the development blueprint for 2008 to 2030 which aims at making Kenya a newly industrializing, middle income country providing high quality life for all its citizens by the

year 2030 (NESC, 2007). The major reforms and innovations in the education sector include; implementation of Free Primary Education (FPE) and Free Day Secondary Education (FDSE), these have accelerated enrollment of students in both primary and secondary schools in the country (Republic of Kenya, 2012).

The government on its recent 2018/2019 budget allocated Sh25 billion to fund a signature campaign pledge: free day secondary education starting January next year. This is perhaps the strongest demonstration by the government that a high school education must become a birthright of every Kenyan child. Ordinarily, this would be absolutely laudable, eliciting universal praise across the land. But the wider society and education professionals have not received the announcement with celebration or praise. Many are disappointed that the policy minders in the ministries of Education and Finance have allowed themselves to be waged by politicians. They have failed to demonstrate professional grit buttressed by evidence. The evidence shows that the introduction of free primary education has been associated with over-enrolment and a disastrous teacher-pupil ratio. Some public schools are in a devastating state lacking or having stalled structures such as classrooms, Laboratories, sanitation facilities, a clear indication that proper planning and construction of such facilities is needed in these schools.

In Imenti north sub-county, in 2016, about 48.8% of the projects were completed, in F/Y 2015-2016 only about 27% were completed, (CDF data North Imenti 2016). Secondary schools have been receiving CDF funding meant to establish or improve existing facilities such as classes, dormitories, laboratories and libraries. However, a number of these school projects and other projects funded by CDF did not materialize. Kimathi (2013) noted that some projects are ghost projects, this include DEB Municipality Secondary schools among others, where nothing has been done. School projects face numerous challenges in management and completion of projects such as inadequate project funding, poor financial management skills by the BOM and poor standard workmanship (DEO's report 2012). It is in this perspective that this study tries to investigate the institutional factors influencing completion of construction projects in public day secondary schools in Imenti north sub-county.

1.3 Purpose of the Study

The purpose of the study was to investigate on institutional factors influencing the completion of construction projects in public day secondary schools in Imenti North Sub-County. This is to try and find out to a certain percentage the factors that lead to incompleteness of projects in various government ministries.

1.4 Research Objectives:

The study was guided by the following research objectives:

- i. To examine the influence of school management on completion of construction projects in public day secondary schools in imenti north sub county
- ii. To establish influence of budgeting allocation on completion of construction projects in public day secondary schools in imenti north sub county.
- iii. To determine how project planning influences completion of construction projects in public day secondary schools in imenti north sub county.
- iv. To assess how monitoring and evaluation influences completion of construction projects in public day secondary schools in imenti north Sub County.

1.5 Research Questions

The research questions were focused on investigating how various institutional factors influenced the completion of construction projects in public day secondary schools in Imenti North Sub County, Meru County. They included the following:

- i. To what extent does school management influence completion of construction projects in public day secondary schools in imenti north Sub County?
- ii. How does budgeting allocation influence completion of construction projects in public day secondary schools in imenti north Sub County?
- iii. In what ways does project planning influence completion of construction projects in public day secondary schools in imenti north Sub County?
- iv. To what extent does monitoring and evaluation influence completion of construction projects in public day secondary schools in imenti north Sub County?

1.6 Significance of the Study

Projects are undertaken to fulfill predetermined objectives. If the projects are not completed, then the objectives shall not have been met and resources shall have been wasted. The significance of

this study is therefore to raise awareness on the school based factors that influence such completion. In addition, making sure the projects are completed in time, is that delaying their completion has the implication of added cost to the tax payer due to inflation and other economic changes. Emphasizing the completion of projects is part of the development agenda since one set of project is completed, the focus is turned to another projects. This is development and it is this development that makes the study to be significant.

The information from study findings would hopefully, enable school heads and administrators to make an informed choice of the project implementation strategy to adopt. This may lead to increased adoption of the most attractive project implementation systems, leading to increase project completion. Findings of this study may also benefit other construction industry sub-sector stakeholders like contractors, consultants; input suppliers, traders and policy makers, who will be able to make more informed decisions.

1.7 Delimitations of the Study

The study focused on institutional factors influencing completion of construction projects in public day secondary schools in Imenti north Sub-County. The study specifically considered all public day secondary schools in Imenti north Sub-County. It targeted school principals, board of management chairs and school accountants of the sampled schools, as well as DEO, DQASO and CDE. Thematically, the study centered around: the extent to which school management, budgeting allocations, planning, monitoring and evaluation, influence the completion of the construction projects in public day secondary Schools in Imenti north Sub-County and whether school heads and other project managers in public day secondary schools in Imenti north Sub-County have adequate project management skills to enable them effectively manage school construction projects.

1.8 Limitations of the study

The study faced certain limitations such as unavailability of various documented information about construction projects in public day secondary schools in the Sub-County and therefore, to address this, the researcher relied on information from the Ministry of Education, Ministry of Public Works and the National Construction Authority in Meru County.

The study was limited to surveyed institutions in one Sub County which could be unrepresentative for all schools in the country given the varied geographical, social, cultural and economic diversity of day secondary schools in Kenya.

Some of the respondents were unwilling to give information due to fear that they were giving out information without authority, but this was overcome by the research explaining the purpose for which the study was being undertaken and assuring them of anonymity

1.9 Basic assumption of the study

This study was based on the following assumption:

- i) That the views of the respondents used for the study was to be representative of the entire population, hence making generalization of the findings possible.
- ii) Completion of construction projects in public day secondary schools in Imenti north Sub-County was mainly influenced by the variables stated in the study objectives.

1.10 Definition of Significant Terms

Construction Projects: This refers to all projects that are erected in the school including: dormitories, classrooms, laboratories, kitchens, administrations blocks, school playing fields schools Dias, schools halls, school pavements, schools water tanks, boreholes, ablutions blocks etc.

Completion of construction projects: This refers to execution of projects in accordance with the planned project scope, specifications, work program, completion schedules and planned budget.

Institutional factors: Institutional factors relate to structures in society. These include rules, norms, and routines that guide behavior. These processes can exist within an organization or the structure may be part of the culture in a particular area

Monitoring and evaluation: is a process that helps improve performance and achieve results. Its goal is to improve current and future management of outputs, outcomes and impact

Project Management skills: These are skills of primary school heads on Project management; includes planning, organizing, monitoring and controlling of all aspects of the project to achieve predetermined objectives of scope, cost, time, and quality and participative satisfaction.

Project Planning: Project planning is part of project management, which relates to the use of schedules such as Gantt charts to plan and subsequently report progress within the project environment. Initially, the project scope is defined and the appropriate methods for completing the project are determined.

Project success: Project success is the completion of school projects within scheduled time, cost and quality.

Stakeholders' involvement: This is inclusiveness of all persons who have interest in a project. They include teaching staff and students, parents, members of the Parent Teacher Association, government, contractors, community leaders etc., their involvement is at different stages during the project life cycle.

1.11 Organization of the Study

This study is organized in five chapters. chapter one is introduction which covers a background to the study, purpose of the study, statement of the problem, research objectives, research questions, significance of the study, delimitations, limitation of the study and basic assumptions of the study. It also provides definitions of significant terms used in the study and organizational of the study.

Chapter two is literature review on institutional factors influencing completion of construction projects in public day secondary schools. The section also contains a conceptual framework, theoretical framework and operational definition that give the relationship between the variables. Chapter three is research methodology outlining research design, target population, sample, sampling procedure and data collection instruments, pilot testing of the instruments, data collection procedures and data analysis techniques, ethical considerations and operational definition of the variables. Chapter four covered data presentation and interpretation of results, While Chapter five presented the summary of major findings, discussion of the findings, Suggestions for further study, conclusions and recommendations of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviewed related literature concerning institutional factors influencing completion of construction projects in public day secondary schools in Imenti North Sub County, which included the following: school management, budgeting allocation, project planning and monitoring and evaluation. The chapter concludes with a conceptual framework which is a diagrammatic representation of the relationship between the independent variables and the dependent variable and then a summary of the chapter.

2.2 Construction projects in public secondary schools

Construction Projects as mentioned earlier refers to all projects that are erected in the school including: dormitories, classrooms, laboratories, kitchens, administrations blocks, school playing fields schools Dias, schools halls, school pavements, schools water tanks, boreholes, ablutions blocks among others.

The National Clearing house for Educational Facilities (NCEF) reported in 2010 that the total number of school-aged children within the United States would increase from less than 60 million to nearly 80 million over the next 40 years. Since this report was released over seven years ago, construction industries can attest to this projected growth due to the rise of children entering schools and other educational environments. Based on these findings, educators today have felt the constant need for more effective classrooms and learning methodologies to satisfy this increasing demand over the past years.

There is no question that education has changed due to new and innovative learning environments that enhance the way students learn in the 21 century. The dawn of the Internet along with other rapid advances in technology, for example, have compelled educators to integrate multimedia into their curriculum as well as adapting new instruction methods to suit a more tech-savvy audience. Sustainability in construction means that the social, economic, and environmental impact of projects are taken into consideration at all stages of the building cycle from design to demolition. Sustainability is properly measured using the Leadership in Energy

and Environmental Design (LEED), a rating system by the United States Green Building Council (USGBC). LEED certifications help evaluate any building's environmental performance and promotes market transformation towards sustainable design. It is not common for schools to employ newer construction methods such as modular buildings because of better LEED certifications such methods attain. One such example is the Kathleen Grimm School for Leadership and Sustainability in Staten Island, NY.

There is a growing need of space that can be modified to match unique needs. Of the 65 million students enrolled in public school system nationwide, 6.2 million students were in California according to statistics released by the California Department of Education in 2016. The report also notes, however, that the number of public schools in the state has not increased proportionately. This calls for a rise in learning spaces that can be assembled faster which can adapt to needs that change daily from one class to the next. This is where modular classrooms really make a difference. In fact, the construction of buildings in modules is gaining popularity. According to Biz Community, it is estimated that in five years over 50 percent of all construction projects will use offsite modular construction and other technologies such as 3D printing.

When it comes to constructing new schools, some believe that a larger campus would benefit student populations by spreading or sharing resources like auditoriums and libraries. Portable classrooms are a great option for schools that must expand for more space to avoid overcrowding. An added bonus is these buildings can be repurposed easily from semester to semester and can even be physically relocated, if needed, from one part of a campus to another. One can easily change classroom space between semesters. But the challenge is transforming the same space in a short period of time to suit the needs of one class to the next. Building solutions that allow for quick transformations will be favoured. For instance, with the help of sliding panels and smart storage, classroom space is easily transformed to fit your needs. Smart classrooms are fitted with multi-media capabilities such as projector screens that can easily be wired to a computer or DVD player. Technology for classrooms has also changed the way students interact with instructors as well as their peers. The lack of a podium from which a teacher traditionally interacts and the use of mobile devices in classrooms opens up unconventional, yet engaging approaches to learning. One of the biggest differences in new school construction is their adherence to individuals with disabilities. The International

Disabilities Education Act (IDEA) was put into place to ensure that public schools provide equal opportunity for children with disabilities so they can be prepared for higher education and employment.

Tanzania after realizing the fact that education is a sure means towards the improvement of the country's economy; it formulated the Education and Training Policy year 1995 which integrated in the formal school system what was called. This is for children aged between 3 years and 6years. The major objective is to introduce pre-schools in every primary school. The government wants these pre-schools to be run by local governments, private institutions and individuals to build and operate pre-schools. The major objective of initiating per-schools is to bring up children by promoting and enriching the experiences so far acquired by the children from community and family in such areas as religion, languages, culture, health care etc. At primary and secondary school levels the government aims at improving access and enrolment levels due to the fact that in the past the education system was characterized by high drop-out rates mainly due to poor teaching methods by Universal Primary Education (UPE) teachers who were themselves failures at primary school levels. The policy was passed by the government after realizing the fact that early childhood education leaves an imprint in the child's mind and it is a significant factor in the mental and social development of children. The government puts stress on this type of education in its effort to develop the country's human resources. It is from this need that Agape Love Education Centre built its foundation to explore this opportunity by coming up with a vision of setting up the Centre for early childhood to access which would help to prevent stunted cognitive development of child and it was reputed for facilitating better future performance in school. Agape Love Education Centre was to offer pre-primary education, primary education and secondary education. Secondary education would consist of ordinary level and high school level. It is estimated that first phase of its construction would be done in the first five years. Most of individual organizations have been measuring their performance for many years but there has been little consistency in the data, and the way it has been published. As mentioned earlier, performance can be measured by key indicators of evaluation which are related to many topics and factors such as time, cost, quality, client satisfaction, productivity and safety Ahmed, Azhar, Castillo and Kappagantulla (2002).

In Kenya, Musera, Achoka and Mugasia (2012) outlines that secondary school heads are selected and appointed by the Ministry of Education (MoE) through the Teachers Service Commission (TSC) and are responsible for construction of projects in schools. The school heads are the accounting officers at the school level and are directly accountable to a District Education Officer (DEO). The schools' Board of managements (BoMs) and the schools' Parent - Teacher Association (PTA) are also part of school management on its resources (World Bank, 2007). The BOMs functions among others include setting up secondary school fees using government guide lines, ensuring sound financial management, mobilizing resources for the school development, monitoring academic performance, setting priorities for spending and authorizing all school expenditures (Republic of Kenya, 2006). On the other hand, Parent Teachers Associations (PTAs) were created as a result of the 1980 presidential directive and are elected on a yearly basis by parents during Annual General Meetings (AGMs). They are charged mainly with the responsibility of ensuring that quality education is offered in the school. Basically, PTAs are responsible for the development of school projects on behalf of the parents besides overseeing the academic performance of the students (World Bank, 2007).

2.3 Completion of construction projects in public secondary school

Project completion may briefly refer to the execution of projects in accordance with the planned project scope, specifications, work program, completion schedules and planned budget.

Project management focuses on responsibility, authority, and scheduling of the project in order to attain defined goals (Baker & Baker, 1992). Essentially, Project Management results in better control and coordination while lessening development period, lowering costs, and generally generating higher quality results. It forces team members to contemplate what needs to be done to achieve project aims and work out how activities can be harmonized while bearing in mind possible risks and trying to alleviate them. Baz (2009) in UK noted that 31% of IT projects were cancelled before completion, and 52.7% of completed projects cost over their original estimates, in addition 1 in 8, is the number of projects that can be considered truly successful. There are six stages of project completion cycle which have been typically identified as: Identification, Preparation, Appraisal, Proposal preparation, approval and financing, Implementation and Monitoring and Evaluation. (Bishop 2001) noted that any given project can result in failure or

success at any of these stages. This could basically account for completion or incompleteness of most of construction projects.

There is no any easy and/or definite definition of success or failure of construction projects, Morris and Hough (1996), Murray et al, (2002). Generally, the factors leading to success (or failure) have been similarly defined in limited proportions by different authors. Murray et al (2002) noted from literature that projects are often labelled as a technical success in spite of being behind schedule and over budget. On the other hand, projects may be ahead of schedule and within budget but still be a technical failure. This position was substantiated by Willard (2005) who provided examples showing the various means by which success have been acknowledged. Within a definite context, Ludin and Soderholm (1995) observed that a project could be considered a success in the sense that it has successfully passed through all the sequences of the typical stages: concepts, development, implementation and termination.

It is also evident that most projects in Kenya are managed by very qualified professionals who end up failing; for instance, the extension by two floors of the school of the built environment building at the University of Nairobi which was supervised by Professors teaching at the same school (Gwaya, Masu, and Wanyona, 2014). This could probably mean that the failure or success of completion of projects may not only result from a managerial perspective but other factors too.

It is from all this growing demand from both global and national perspective of basic education as a steering wheel for the development of economy and quality living standards of citizens that have resulted to acute need of infrastructural projects in public secondary schools. The researcher undertook to venture in Imenti North Sub county of Meru county, Kenya which according to the Ministry of Education(MoE) statistics (2010) had a progressive record of increasing enrolments of school going children in order to investigate the institutional factors influencing the completion of construction projects in the Sub County.

2.4 School management and completion of construction projects

School management is a complex process that requires committed and visionary leadership Bush (2007). A school principal is charged with the responsibility of managing school physical facilities, staff personnel, school finance, the curriculum, students and school community

relations Kelechukwu (2011). As such, the school principal acts as a project manager. Project management processes are normally divided into initiating, planning, executing, controlling and closing processes Prabhakar (2008).

Looking at the principal as a project manager, one is expected to plan, implement, manage, maintain and evaluate the entire education system physical facilities, human resource, students, financial inputs and the curriculum then we see the need for adequate preparation of school heads in project management during the construction of infrastructural facilities. Effective execution of school management tasks requires that principals be adequately trained. However secondary school principals in Kenya are appointed from serving teachers Okumbe (2008). As Olembo (2012) and Okumbe (2008) noted, little orientation is given as to the nature of the work they are supposed to do as education programme managers. Hence, this may be the reason why most schools in our country have stalled projects, dilapidated structures, and register poor academic performance. It is not an easy task to measure the effectiveness of project management in a school setting. This, according to Okumbe (2008), is mainly because different schools have different financial capabilities, and resource distribution in different schools varies. As such, the study measured principals' perceived effectiveness in project management.

A competent professional is generally understood to be someone who can do the job Kumar & Prasad (2013). Competence in a profession is consistently meeting the objective criteria for performance on the job Ireland (2004). It is generally agreed that the overall scope of competence these three areas: knowledge, skills and attitude. To start with, knowledge is one aspect of competence. According to Ireland (2004), knowledge consists of the general and specific project management theory, concepts, practices, procedures, processes, and methodologies that apply to an industry and the complexity of projects being conducted. The project manager (PM) must first possess knowledge of the technical aspects of the industry to an extent that he or she understands the product and service being built and delivered. The other aspect of competence is skill. Skills are the application of knowledge to project work that ensures accomplishment of the work in an effective and efficient manner Ireland (2004).

Katz (1974) proposed that managers need three critical skills in managing: technical, human, and conceptual skills. Technical skills are the job-specific knowledge and techniques needed to proficiently perform work tasks. These skills tend to be more important for first line managers

because they typically are managing employees who use tools and techniques to produce the organization's products or service the organization's customers Robbins & Coulter (2012).

Human skills involve the ability to work well with other people both individually and in a group. Managers with good human skills get the best out of their people. Human skills are demonstrated in the way a manager relates to other people, including the ability to motivate, facilitate, coordinate, lead, communicate, and resolve conflicts Daft (2012). Finally, conceptual skills are the skills managers use to think and to conceptualize about abstract and complex situations. Using these skills, managers see the organization as a whole, understand the relationships among various subunits, and visualize how the organization fits into its broader environment Reok,(2014). Attitude as the third aspect of competence is the personal and professional demeanor exhibited by a person while performing his or her work Ireland (2004). He notes that attitude includes drive, energy, good instincts, and dedication. In the context of competence, this would be a positive outlook and an ability to not take one's self too seriously. A project manager must demonstrate the correct attitude when working with all the project stakeholders, e.g., project team, senior management, customer, and special interest groups Ireland (2004).

Several studies have therefore, identified management and leadership related factors to cause delays in completion of school construction projects. Kerzner, (2008) assert that incomplete drawings, late issuance of instructions and inadequate supervision critically impacted on delays in construction projects in public learning institution. Kumar and Prasard, (2013) concluded that inadequate site supervision by the school managers was the major cause of delay in completing school constructions. Pongpeng and Liston, (2013) identified delays in approving major changes in the scope of works, inadequate experience of the school managers and late in reviewing design documents as critical. In a separate study in United States, Arditi and Mochtar (2010) identified delays in design work and inadequate site inspection as the main causes of management related delays. These findings are also supported by the observation made by Assaf and Hejji (2006) who identified the consultant related delay factors as; delay in performing inspection and testing the consultant, delay in approving major changes in the scope of work by consultant, inflexibility (rigidity) of consultant, poor communication and coordination between consultant and other parties, late review and approval of design documents by consultants, conflicts between consultant and design engineer, inadequate experience of consultant. They further identified

design errors made by designers, changes in types and specifications during construction, insufficient communication between owner and consultant during design stage as critical. In another study conducted by Chan and Kumaraswamy (2007) in country, the study identified delays in design information, inadequate design team experience and mistakes and discrepancies in design documents as some of the management related factors causing delays in completion of school projects. In a separate study, El-Razek et al., (2008) concluded that design changes during construction, changes in material types and specifications during construction and design errors made by designers contributed to delays in project completion.

Similarly, Cooke-Davis, (2011) explains that performing inspection and testing, poor communication and coordination with other parties, and conflicts between consultant and design engineer as the most significant in causing delays. Iyer and Jha (2006) identified the factors of inadequate project formulation in the beginning and reluctance in timely decision by the consultant as key causes of delay. Kumaraswamy and Chan et al., (2008) identified the factors of unforeseen ground conditions, delays in design information and necessary variations of works as key consultant related delays. Harris and Macaffer, (2009) looked at the causative factors in terms of technical risks that included design failure, estimation error and new technology failure.

These findings are supported by Lock (2007) who also found that problems of poor contract management, mistakes and discrepancies in contract documents and inspection and testing of completed portions of work as key causes of management related delays in completing school projects.

2.5 Budget allocation and completion of construction projects

The problem of delays in the construction of school projects is a global phenomenon. In Saudi Arabia, Assaf and Al-Hejji (2006) found that only 30% of construction projects were completed within the scheduled completion dates and that the average time overrun was between 10% and 30%. In Nigeria, Odeyinka and Yusif (2002) have shown that seven out of ten projects surveyed in Nigeria suffered delays in their execution. Ogunlana and Promkuntong (1996) conducted a study on construction delays in schools in Thailand and came up with similar result. Al-Momani (2000) carried out a quantitative analysis on construction delays in schools in Jordan. Frimpong, Oluwoye, Crawford,(2003)conducted a survey to identify and evaluate the relative importance of the significant factors contributing to delay and cost overruns in Ghana construction projects.

Chan and Kumaraswamy (1997) studied delays in Hong Kong construction projects. They emphasized that timely delivery of projects within budget and to the level of quality standard specified by the client is an index of successful project delivery.

Failure to achieve targeted time, budgeted cost and specified quality result in various unexpected negative effects on the projects. Normally, when the projects are delayed, they are either extended or accelerated and therefore, incur additional cost. The normal practices usually allow a percentage of the project cost as a contingency allowance in the contract price and this allowance is usually based on judgment. Although the contract parties agree upon the extra time and cost associated with delay, in many cases there are problems between the school and contractor as to whether the contractor is entitled to claim the extra cost. Such situations, usually involve questioning the facts, causal factors and contract interpretation. Therefore, delays in construction projects give rise to dissatisfaction to all the parties involved and the main role of the project manager is to make sure that the projects are completed within the budgeted time and cost.

In Kenya, with introduction of free secondary education, schools get some funding from the government while parents are required to meet various other costs such as school development projects and boarding fees (Republic of Kenya, 2005). Head teachers play a major role in the management of all school financial activities, which involve the disbursement of money. The money is obtained through various sources such as fees. (Orlosky 1984) states that financial management determines the way the school is managed and whether or not the school will meet its objectives. The head teacher is responsible for budgeting, accounting and auditing functions of financial management.

According to Bathurst and Butler, (2008) cost and designs are closely linked and it is important to ensure that projects are delivered within their approved budgets and that the design represents value for money. Projects should be designed taking account of both capital and operational costs, whole-life costing is an integral part of the design process, and whole-life costs of key components of a facility should be considered during the design process Majid (2008). To ensure value for money, a balance should be struck between initial capital costs and expected replacement costs over the life of the facility Bosire (2012). Ochieng and Tubey, (2013) observe that at a more general level, project finance is only one aspect of the general problem of corporate finance. If numerous projects are considered and financed together, then the net cash

flow requirements constitute the corporate financing problem for capital investment. Ashworth, (2014) postulates that whether project finance is performed at the project or at the corporate level does not alter the basic financing problem. In essence, the project finance problem is to obtain funds to bridge the time between making expenditures and obtaining revenues Kerzner (2008).

Schools have limited resources and sometimes as (Mulwa, 2008) puts it projects run out of resources prematurely leading to premature termination of implementation. Mulwa (2008), further argues that premature depletion of project resources can be caused by bureaucratic bottlenecks leading to delays in resource requisition and delivery. This could be a consequence of poor communication and inadequate coordination between the project site and the central stores or between the project management and the organizational authority. At times the latter's change of priorities could also lead to diversion of resources to another cause. He argues further that poor or inaccurate estimates in the initial budgeting also cause premature project resource depletion. This would often result from failure to anticipate contingency costs and the possible fluctuation of prices as a consequence of inflation.

2.6 Project planning and completion of construction projects

Traditional wisdom is that planning and analysis are important and with planning in a project, the project will be more successful (Wang and Gibson, 2008; Dvir, Raz and Shenhar, 2003). Time spent on these activities will reduce risk and increase project success. On the other hand, inadequate analysis and planning will lead to a failed project (Morris, 1998; Thomas, Jacques, Adams and Kihneman-Woote, 2008).

Thomas, et al (2008) state "the most effective team cannot overcome a poor project plan" and projects started down the wrong path can lead to the most spectacular project failures. Morris (1998: 5) similarly argued that "The decisions made at the early definition stages set the strategic framework Get it wrong here, and the project will be wrong for a long time". Munns and Bjeirmi (1996) state that for a project which is flawed from the start, successful execution may matter to only to the project team while the wider organization will see the project as a failure. (Blomquist et al 2010) state "Plans are a cornerstone of any project; consequently, planning is a dominant activity within a project context." This is a recurring theme: planning is inherently important to project success or one could argue project management would not exist. Project management has a long history in the construction industry and there have been a number of

studies in the construction project management field on the relationship between planning and project success: this is a well-studied area in comparison to other industries or other areas in project management. Hamilton and Gibson (1996) found that an increase in pre-project planning for construction projects increased the likelihood of a project meeting financial goals. The top third of projects from a planning completeness perspective had an 82% chance of meeting those goals while only 66% of projects in the lower third did (a difference of 16%). Similar results are seen for schedule and design goals. Shehu and Akintoye (2009) found in a study of programme management in the construction industry that effective planning had the highest criticality index of .870 of all the Critical Success Factors (CSF) studied.

Gibson, Wang, Cho and Pappas (2006) noted that research results show that effective pre-project planning leads to improved performance in terms of cost, schedule, and operational characteristics. Surprisingly little research has been done on how much planning should be done in projects. Daly (1977) states that schedule planning should be 2%, specifications 10% and final design 40% of the total cost. However, now much design is done during execution. Similarly Posten (1985), states that plans and requirements should be 6% of project cost, product design should be 16% and detailed design 25%. Empirical guidance on how much time to plan has become less common over time in the technology literature. Whether this is because this guidance was found not to be effective, the diversity of technology projects increased or it simply fell out of favor is not clear

Chatzoglou and Macaulay (1996) outline a rule of thumb for planning effort: The three times-programming rule and the lifecycle stage model. “one estimates how long it would take to program the system and then multiply by three” to get the total. Software testing is estimated to take roughly an equal amount of effort as development, (Kaner, Falk & Nguyen, 1999). This leaves one third of total effort for the planning phase and other miscellaneous tasks.

Dvir et al. (2003), state “with the advancement in computerized planning tools and the blooming in project management training, a certain level of planning is done in all projects, even in those that eventually turn out to be unsuccessful projects. Hence, when a certain level of planning is done in all types of projects, a significant statistical correlation cannot be found in the data.” This is a critical point. The question of whether planning is correlated with project success may be a moot point. The benefits of planning have been confirmed through the practice of project

management as well as through research. It has thus become an expected part of all projects and project management. It has, as Turner and Müller (2003), state become a hygiene factor for successful projects, “There is growing evidence that competence in the traditional areas of the project management body of knowledge are essential entry tickets to the game of project management, but they do not lead to superior performance.

Studies done on schools’ projects in some developed countries like USA, UK and Australia unravel various challenges faced by school principals in management of projects, (Kitavi and Westhuizen, 1997), For instance, they experience project specific problems related to implementation, financial resources, community relations and project management (Hale and Hunter, 2003). In Virginia USA, local school divisions and school boards are responsible for developing the educational and architectural program specifications as well as determining the number and type of classroom spaces needed for a school construction project (Virginia Department of Education, 2010).

2.7 Monitoring and evaluation and completion of construction projects

Globally, monitoring and evaluation has relevance in management of project scope, time, cost, quality, human resources, communication and risks. A study by Prabhakar (2008) pointed that monitoring and feedback is a factor leading to project success. The probability of achieving project success seemed to be enhanced among other factors, by steadily monitoring the progress of a project. In agreement, Hwang and Lim (2013) also proved that monitoring and evaluating budget performance, schedule performance and quality performance could result in project success. Ika, Davis, Lascon, & Uhl (2010) carried out a regression analysis which shows that there was a significant and positive relationship between each of the critical success factors and project success. The critical success factors include monitoring, coordination, training and Institutional environment.

In Kenya, studies carried out show that quite a number of projects have been successful. This is according to (Kimando, 2013). On the other hand, several projects in Kenya have been cited as failed projects; meaning that they did not achieve success. Some studies show that one of the drawbacks of monitoring and evaluation in Kenya is failure by the management to implement the recommendations offered by the monitoring and evaluation team (Ochieng, Odeh, and Battaineh, 2012).

Stakeholders require accountability in terms of resource use and impact of the project, transparency and good project performance. Crawford and Bryce (2003) define accountability as the means by which individuals or organizations report to recognized authority and are held responsible for their actions. They further discuss that accountability entails transparency in decision making and honest reporting of how and what resources have been used and what has been achieved by the project. It is important that there be accountability of the resources so that parents are motivated to commit more funds. Other stakeholders also “owned” the project if it was accountable to them and was not seen as a money making venture for a few individuals.

Effective monitoring and evaluation of projects is usually one of the ingredients of good project performance. It provides means of accountability, demonstrating transparency to the stakeholders and facilitates organizational learning through documenting lessons learned in the implementation of the project and incorporating the same in the subsequent project planning and implementation or through sharing experiences with other implementers.

According to Lock (2000), once the project is on, monitoring and measurement of progress has to be carried out to ascertain the quality of workmanship, materials and building methods. The chairman or project manager bears responsibility for the conduct of meetings relating to the project. Progress reports addressed to management will have to set out the technical fulfillment and financial status of the project, and compare the performance in each of these respects with the scheduled requirement. Such reports are usually issued at regular intervals, and they may well be presented by the project manager during the course of project review meetings.

Many things can happen during the life of a project to alter the expected rate and magnitude of expenditure. The direction of change is usually upward. Some of the reasons may be unavoidable or unforeseen but, in many cases, the fault will lie somewhere within the project organization. Hence, cost control should be administered to ensure that no preventable wastage of money or unauthorized increase in costs is allowed to happen (Burke, 2003).

Lack of adequate monitoring and evaluation expertise or capacity among the local management is one area that has been highlighted by several scholars among them (Hughes 2002). Monitoring and evaluation requires specific skills and expertise such as monitoring and evaluation design skills particularly log frame design, indicator setting: both qualitative and quantitative, design of

data collecting instruments including questionnaires, focus discussion guides. Lack of adequate financial resources to carry out monitoring and evaluation was another challenge faced by these local managers. A good number of schools lacked adequate funding for their activities: this meant that the little resources available were channeled to actual implementation of project activities: monitoring and evaluation were looked at as an expense that they could not afford.

Magondu (2013) also noted that financial availability is the most important resource in any functional organization as far as other resources such as human are concerned. To set up a monitoring department, finances are required. He further elucidates that staff capacity both in numbers and skills are also very instrumental in any effective implementation and sustainability of monitoring and evaluation. The staff needs to be equipped with the relevant skills for performance and success. Other factors also play a role in strengthening monitoring teams which includes: frequency of monitoring to identify changes, number of persons monitoring project schedule, extent of monitoring to detect cost over runs (Ling, Bruce, Samson, & Joseph, 2009).

2.8 Theoretical Framework

The study was guided by two theories namely; the structural functionalism theory and contingency theory as discussed below.

2.8.1 Structural functionalism theory

The most notable proponents of this theory included, Merton, Parsons, Durkeim, Blau, Radcliffe and others .According to this theory, formal organizations consist of many groupings of different individuals, all working together harmoniously towards a common goal. It argued that most organizations were large and complex social units consisting of many interacting sub-units which were sometimes in harmony but more often than not they were in diametric opposition to each other. Functionalism is concerned with the concept of order, formal work in organizations and in particular how order seems to prevail in both systems and society irrespective of the changes in personnel which constantly takes place. The theory sought to understand the relationship between the parts and the whole system in an organization and in particular identify how stability was for the most part achieved. Structural functionalism further advocated for an analysis of the perceived conflicts of interests evident amongst groups of workers. In this case the parents, sponsors, and teachers, members of the board, contractors and the Ministry of Education. However, it was crucial to take into account conflicts of interests and differing value-basis in

order to understand the organizations (Carr and Capey, 1982). The theory thus appropriately explained some conflicts between the head teachers and governing bodies in the management of public primary schools in Kenya. The school as a social system had within it a series of sub-systems which interacted with each other and the environment. Such school sub systems included sponsors, teachers, BOG, PTA, students, support staff and the government. Their interactions should be harmonious for effective achievement of educational goals as well as completion of projects. This theory had been criticized for being unable to account for social change because it focused intently on social order and equilibrium in society.

2.8.2 Contingency theory

This study also adopted the contingency theory of Fred Edward Fiedler of (1967) in project management. Contingency theory is a class of behavioral theory that claims that there is no best way to organize a project, to lead a company, or to make decisions. Instead, the optimal course of action is contingent (dependent) upon the internal and external situation. Contingency theory has gradually emerged during the last two decades. Specific frameworks for project management have often been influenced by research from disciplines such as innovation, organization theory, management, computer science, product development, and engineering. Among some of the early writers in defining a typology of projects were Blake (1978), who suggested a distinction between minor change (alpha) projects and major change (beta) projects, and Steele who looked at innovation types in big business. Wheelwright and Clark (Wheelwright and Clark, 1992) introduced a well-recognized typology for product development projects, which included derivatives, platforms, and breakthroughs; and more recently, several other authors have suggested additional frameworks in an attempt to categorize and distinguish between different project types (Pich, Loch, a& De Meyer 2002).

This literature was focused on a single industry and often on small projects (Soderlund, 2005). The Project Management Institute (PMI) has recognized the need for identifying unique and project-specific project management principles for different project types, particularly with the development of government, Department of Defense, and construction extensions to the Project Management Body of Knowledge (PMBOK) (PMI, 2003). While not all studies mentioned are empirically based, many of these frameworks were developed independently, sometimes under the separate but highly relevant realms of innovation or technology management and often in

ways that were unique to their particular environment Collectively, the study suggests that not all projects are the same, nor should they be managed in the same way.

2.9 Conceptual Framework

A conceptual framework is a tool researchers use to guide their inquiry; it is a set of ideas used to structure the research, a sort of a map (Kothari, 2012). It is the researcher's own position on the problem and gives direction to the study. It may be an adaptation of a model used in a previous study, with modifications to suit the inquiry. Aside from showing the direction of the study, through the conceptual framework, the researcher can be able to show the relationships of the different constructs that he wants to investigate. The conceptual framework below, which depicts the relationship between the dependent and independent variables, guided this study.

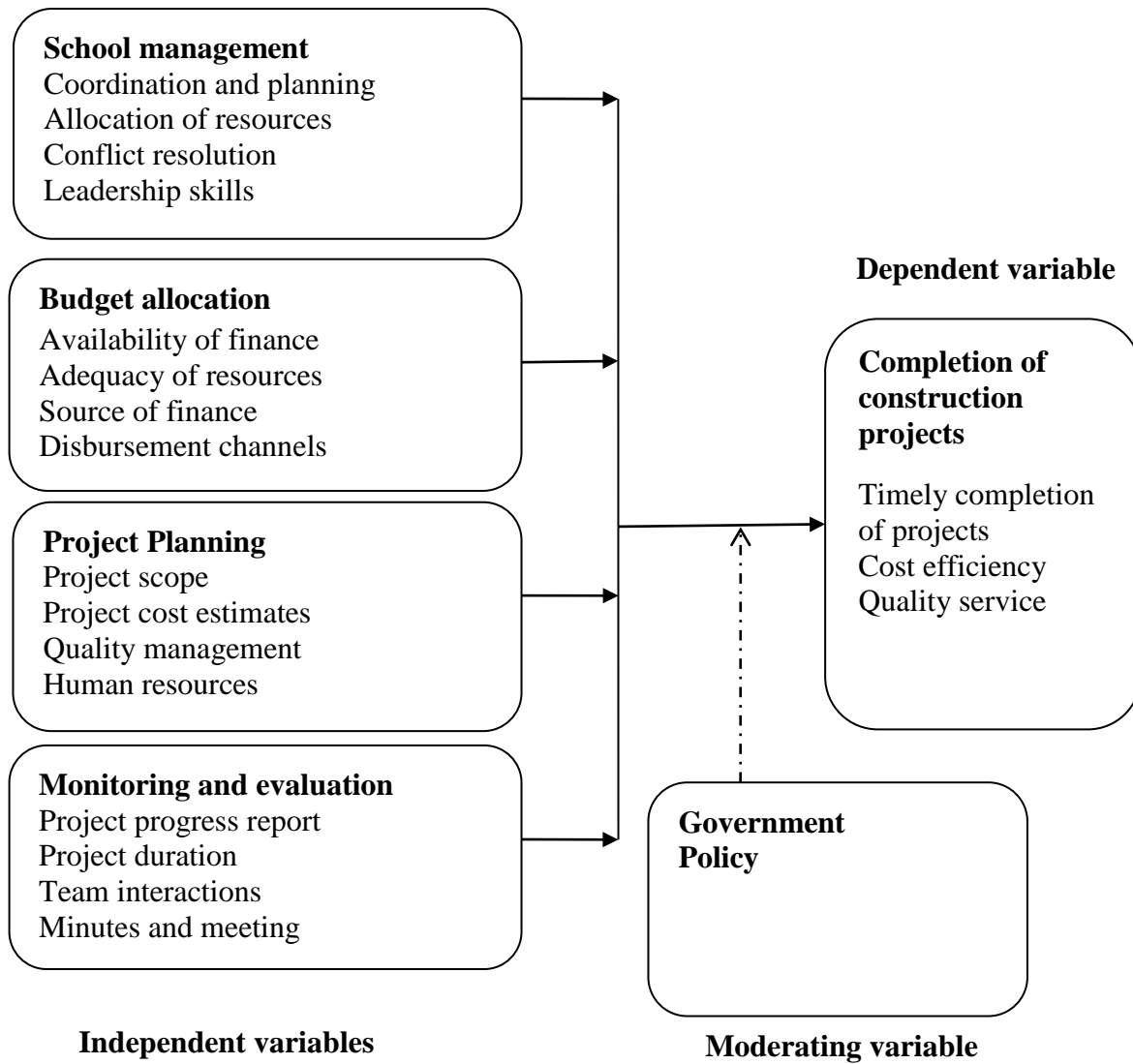


Figure 2.1. Conceptual framework

Figure 2.1 shows the relationship between the dependent and independent variables of the study. As shown in the figure, the completion of construction projects in day secondary schools, which is the dependent variable, could be affected by institutional factors such as the school management, budget allocation, Project planning and monitoring and evaluation. For instance qualification of principals in school management is key factor that could influence success of projects because challenges of implementation of the projects according to design or specification need adequate skills in project management. Also availability and adequacy of financial resources; if financial resources are available and adequate, then projects implementation is likely to be successful but if funds are not available or inadequate, projects may not be completed in time. This has been the case with many CDF projects in Kenya. Where if a member of parliament starts various projects and happen to lose the seat before completing, the following Member of Parliament would not complete the stalled projects of the former rather venture on his own to garner political mileage. This follows repetitively. Involvement of all stakeholders is also crucial for project completion, this is where a principal may okay a project without involving key stakeholders like the local community and beneficiaries such projects are likely to stall and remain uncompleted for a long time, Project communication could also affect project to be completion in time or well due to demands which because of lack of coordination they end up not achieving the objective especially in rural schools where human skills for project design are wanting. Proper planning for the project would also lead to project success while lack of proper planning would lead to its incompleteness or failure. For example, proper allocation and estimation of resources. Similarly, good monitoring and evaluation skills would result to the success of the project and lack of such skills would lead to failure of the project.

Intervening or moderating variable that may influence the relationship between Dependent variables and Independent variables is the Government policy – which may come up with strategies/legislation that would affect project construction and completion. All the above factors have either direct or indirect influence on the successful completion and timely delivery of construction projects in public day secondary schools.

2.10 Research gaps

Various studies have indicated that successful completion of projects is multifaceted and that no single factor can lead to successful completion in projects. The following table 2.1 shows the examples of research gaps in this study.

Table 2.1 Research gaps

Variable	Source of literature	Findings	Knowledge gap
Measure of successful projects	Greer (2009)	Project is said to be successful if it satisfies the following; Performance (required specification), appropriate cost and timely.	There is no study on completion of projects in day schools in Imenti North sub county
Difference between project success and project management success	De Wit (1988)	Project success is measured by comparing the project outcomes to the overall objectives of the project; while project management success tends to be measured against the traditional measures of performance, that is, cost, time and quality.	There is no such study on day schools in Imenti North sub county
Relationship between schedule delay and cost escalation	Cooke Davies (2002)	There was a strong correlation between schedule delay and cost escalation. However, cost escalation was not primarily caused by schedule delay but due to lack of mature scope change process thus project did not achieve success.	There is no such study on day schools in Imenti North sub county

<p>Factors that may lead to success or failure of projects</p>	<p>Sutton (2005)</p>	<p>Projects success and failure are not dichotomous, it is not a matter of completion per se, but that there are degrees of success and failure when implementing projects to its completion. He identified four distinct levels of success, each having its own discipline, tools and techniques. He identifies these factors as institutional, circumstantial and individual undertaking that directly or indirectly influence successful completion.</p>	<p>There is no such study on day schools in Imenti North sub county</p>
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CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter mainly deals with the description of the methods and procedures that were followed while carrying out the study. It consists of research design, target population, sample size and sample selection, research instruments, instruments validity and reliability, data collection procedures and data analysis techniques, ethical considerations and operational definition of variables.

3.2 Research Design

The researcher used a descriptive survey design to establish the institutional factors influencing implementation of construction project in public day secondary schools. A survey is an attempt to collect data from members of a population in order to determine the status of that population with respect to one or more variables. Ogula (2005) noted that the survey design is an efficient method of collecting descriptive data regarding current practices, conditions and need in population. Survey design enables the researcher to summarize and organize data in a meaningful way and be able to describe the existing relationship effectively (Mugenda and Mugenda 2003).

3.3 Target Population

The target population for this study consisted of all the 43 principals, 43 accountants/bursars and 43 chairpersons of the board of management from the 43 secondary schools in Imenti North Sub County. The District Education Officer, the District Quality Assurance and Standards Officers (DQASO) and the County Director of Education (CDE) were also targeted making a total of 132 target population.

Table 3.1 Target Population

Category	Population	Percentage
Principals	43	32.58
BOM Chairpersons	43	32.58
Accountants/Bursars	43	32.58
DEO	1	0.76
DQASO	1	0.76
CDE	1	0.76
Total	132	100%

Source: DEO Imenti North Sub County (2017)

3.4 Sample Size and sampling procedure

Sampling is the process of selecting few cases in order to provide information that can be used to make judgments about a much larger number of cases. From the 132 members of the target population, the study used proportionate sampling method to select 90 participants to be used as the sample size since the study was based on Day secondary schools. This included 29 Principals 29 BOM chairpersons, 29 accountants/bursars, the Imenti North Sub County DQASO, DEO and the County Director of Education (CDE) were also selected. This constituted 68.18% of the target population

The study adopted a census approach where all the members of the sample size were contacted for the study. Census approach is appropriate where the target population is small and all can be easily contacted as is the case for this study. Table 3.2 shows the sample size.

Table 3.2 Sample size

Category	Population	Percentage
Principals	29	32.22%
BOM Chairpersons	29	32.22%
Accountants/bursars	29	32.22%
DEO	1	1.11%
DQASO	1	1.11%
CDE	1	1.11%
TOTAL	90	100%

Source: DEO Imenti North Sub County (2017)

3.5 Data Collection Methods

Data was collected by the use of a questionnaire. A written questionnaire is a data collection tool in which written questions are presented that are to be answered by the respondents in written form. These written Questionnaires were administered to respondents via hand-delivery and collected later. The questionnaires incorporated both open-ended and closed-ended questions items which were used to gather the necessary data to conduct this study. According to Cooper and Emory (2008), the questionnaire is conveniently used because it is cheaper and quicker to administer, it is above researcher's effect and variability, and is highly convenient for the respondents as they could fill them during free times or when workloads are manageable.

3.5.1 Pilot Testing of the instrument

According to Mugenda and Mugenda (2003), the purpose of piloting the instrument is to ensure that items in the instruments are stated clearly and have the same meaning to all respondents. It's at this stage that the researcher is able to assess the clarity of the instruments and the ease use of the instruments. Pilot testing may prevent costly mistakes and an important step in the research process. For this study fifteen questionnaires were administered in Tigania sub-County which neighbors Imenti sub-County. Fifteen respondent were selected randomly a week before the

main study so as to allow the researcher enough time to make changes to the questionnaire, before the questionnaire is presented to the respondents.

The purpose of pilot testing was to refine the questionnaire so that respondents would have no problem in answering questions and no problem in recording the data. In addition it enabled the researcher to obtain some assessment of the questions' validity and the likely reliability of the data that was collected. Preliminary analysis using the pilot test data was undertaken to ensure that the data collected enabled the researcher's investigative questions to be answered

3.5.2 Validity of the instrument

Validity is the accuracy and meaningfulness of inferences, which are based on the research results; it is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Mugenda & Mugenda, 2003). To enhance the validity of the questionnaires, the instruments were reviewed under the supervision of the research supervisors in order to ensure they captured valid and reliable information. The questionnaires were pre-tested to ensure their validity.

3.5.3 Reliability of the instrument

Reliability can be defined as the extent to which a method can be replicated by others under similar conditions (Gummesson, 1991). Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda and Mugenda, 2003).

To test the reliability of the instruments, the researcher employed the test- retest during the pilot study. The researcher then administered the questionnaires on 5 school principals, 5 bursars and 5 B.O.M. chairpersons. After one week the researcher administered the same instruments to the same respondents. The researcher then used Spearman rank correlation formula to correlate scores from both test periods to obtain correlation coefficient. Spearman rank moment correlation establishes the extent to which content of the instruments are consistent in eliciting the same responses every time the instrument is administered (Jwan, 2010). Table 3.3 shows the Spearman rank correlation of the reliability of the instruments.

The Spearman's rank correlation that was adopted was the following model;

$$r_s = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

Where;

d = u – v (the difference between rank of the paired variables)

n = the number of pairs of the variables

r_s is the spearman's rank which lies between -1 and +1 inclusive

-1 – Perfect negative correlation

-0.5 – Moderate negative correlation

0 – No correlation

0.5 – Moderate positive correlation

1 – Perfect positive correlation

Table 3.3 Spearman rank correlation of the reliability of the instruments.

Extent of influence to completion of projects	First Week (u)	Second week (v)	d = u-v	d ²
Very great	3	4	-1	1
Great	5	4	1	1
Moderate	3	3	0	0
Low	2	3	-1	1
Very low	2	1	1	1
	n = 15	n = 15		∑d ² = 4

$$r_s = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

$$1 - \frac{6 \times 4}{15(15^2 - 1)}$$

$$1 - 0.007 = 0.993$$

Conclusion; there was a perfect positive correlation between the sets of instruments given, hence reliable.

3.6 Data Collection Procedure

A letter of identification from the University of Nairobi was obtained from the Extra Mural Centre which was used to obtain a research permit from the National Council of Science and Technology. Permission was sought from the relevant authorities prior to the commencement of the study. The researcher reported to the relevant authority before proceeding to the field. Such authorities included the District Education Office, Imenti North for self-introduction and subsequent authorization to conduct research. A letter of transmittal was written which introduced the researcher to the respondents and assured them of total confidentiality of their responses. In this study, data was collected through a drop and pick method where the questionnaires were dropped in the schools then picked after 5 days. The whole process of data collection was administered individually by the researcher

3.7 Data Analysis Technique

According to Kothari (2009), after collection of the data it should be processed and analyzed in accordance with the outline laid down for that purpose at the time of developing the research plan. Data collected was coded with regard to the type and source. Data collected was analyzed and interpreted both qualitatively and quantitatively in the light of the research objectives. Spearman's Rank Correlation was used to determine the strength of association between variables of interest. Analysis of data was conducted with the aid of the Statistical Package for Social Sciences (SPSS). Qualitative statistical techniques were used to describe and summarize data. The results were then presented and interpreted in the form of descriptive statistics, percentages, means, mode and correlation. The findings were represented in tables and pie charts.

3.8 Ethical Considerations

The following ethical considerations were taken into account during the study. The need for approval of the research project by the University of Nairobi was essential to give validity to the document and to show that the study was done according to approved research standards and practices. Information obtained from other sources or from other authors to support the relevance of this research was adequately acknowledged in the form of references. The researcher adequately and clearly explained the purpose of the study to the respondents during data collection process so as to gain their trust and confidence. Before administering the questionnaires, the researcher sought permission from the respondents to participate voluntarily

in the study. Information that was provided by the respondent was treated with high confidentiality and for the research purpose only.

3.9 Operationalization of Variables

The Operationalization of a variables means manipulating both the independent and dependent variables in such a way that they end up having a few levels thus becoming measurable.

Objective	Variables	Indicators	Data collection method	Measurement Scale	Type of analysis /Type of data
To examine the influence of school management on completion of construction projects in public day secondary schools in Imenti North sub county	Independent variable	Coordination and planning Allocation of resources Conflict resolution Leadership skills	Questionnaire	Nominal	Quantitative
			Questionnaire	Interval	
			Questionnaire	Nominal	Quantitative
			Questionnaire	interval	Quantitative
To establish influence of budgeting allocation on completion of construction projects in public day secondary schools Imenti North sub county.	Independent variable	Availability of finance Adequacy of finances Source of finance Disbursement channels	Questionnaire	Nominal	Quantitative
			Questionnaire	Nominal	Quantitative
			Questionnaire	Interval	Quantitative

To determine how project planning influences completion of construction projects in public day secondary schools in Imenti North sub county.	Independent variable	Project scope Project cost estimates Quality management plan Human resource plan	Questionnaire	Nominal	Quantitative
			Questionnaire	Interval	Quantitative
			Questionnaire	Interval	Quantitative
			Questionnaire	Interval	Quantitative
To assess how monitoring and evaluation influences completion of construction projects in public day secondary schools in Imenti North Sub County.	Independent variable	Project progress report Project duration Team interactions Minutes and meetings	Questionnaire	Nominal	Quantitative
			Questionnaire	Interval	Quantitative
			Questionnaire	Nominal	Quantitative
			Questionnaire	Interval	Quantitative

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents Data analysis, presentation and interpretation of the findings. It has analysed and presented data on institutional factors influencing completion of construction projects in public day secondary schools in Imenti North Sub-county, Meru County in Kenya. The findings were presented on; response rate, general information which captured age, gender, academic qualification and work experience on their positions. Data on the influence of school Management, Budget allocation, Project planning, Monitoring and evaluation on the completion of construction projects in day secondary schools in Imenti North Sub County, was also analyzed, presented and interpreted. The primary data obtained from the engaged respondents was represented by use of tables and pie charts.

4.2 Response Rate

Response rate refers to the number of people who participated in the research. In this case, a total of 90 questionnaires were distributed and 83 were collected having been filled completely. This constituted a response rate of 92.22% which According to Mugenda and Mugenda (2003) a response rate of above 50 percent is adequate for analysis and reporting. This response rate was achieved because the researcher made call backs and administered the instruments to each respondent in person to ensure they all took part.

Table 4.1. Response return rate

Respondent category	Issued	Returned	Percentage return
Principals	29	28	96.55%
BOM Chairpersons	29	24	82.76%
Accountants/Bursars	29	28	96.55%
DEO	1	1	100%
DQASO	1	1	100%
CDE	1	1	100%
TOTAL	90	83	92.22%

From the Table 4.1, the response rate was 92.22% which was rated as very good to produce sufficient data for the research. This was because most of the respondents could be contacted physically by the researcher.

4.3. General profile of the respondents

The general profile of the respondents included their gender, age, level of education and the duration on their current positions.

4.3.1 Gender distribution

The gender distribution was as obtained from the questionnaires. This was to establish if there was gender balance in the response obtained and general findings of the entire study. This was as shown in the table 4.2 below.

Table 4.2 Gender distribution

Respondent category	Male		Female	
	Frequency	Percentage	Frequency	Percentage
Principals	16	57.14%	12	42.86%
BOM Chairpersons	24	100%	0	0.00%
Accountants/Bursars	25	89.29%	3	10.71%
DEO	1	100%	0	0.00%
DQASO	1	100%	0	0.00%
CDE	1	100%	0	0.00%
TOTAL	68	81.93%	15	18.07%

(Source: Secretary KEPSHA Imenti North 2018)

From table 4.2 above, it was evident that there were more male respondents (81.93%) than female respondents (18.07%). This could imply that management roles especially on BOM chairpersons was an issue to be addressed in the sub county. However, this gender disparity didn't influence the outcome of the study in any negative way.

4.3.2 Age distribution of respondents

The age of the respondents was as obtained from the questionnaires. This was significant in order to ascertain the credibility and reliability of the information given. The age distribution of all the respondents engaged was as shown in the figure 4.1 below.

Figure 4.1 Age distribution

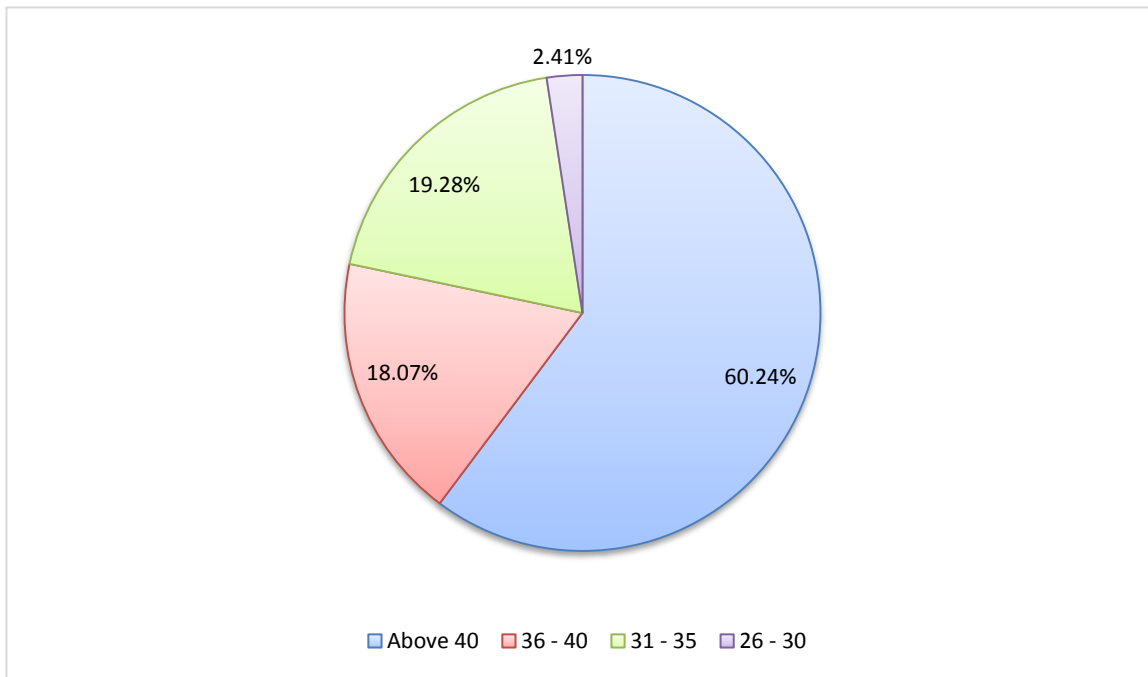


Figure 4.1 shows the age distribution of the respondents engaged. It was observed that most of the respondents were above 40 years implying that they had vast experience on their job requirements. Most of the accountants engaged were youthful in nature that is below 40 years.

4.3.3 Level of Education of respondents

The study sought to establish the academic qualification of the respondents which would in a way determine the magnitude of the responses given. The table 4.3 below shows the education level of the respondents.

Table 4.3 Level of education of respondents

Highest Education	Frequency	Percentage
Post Graduate	13	15.66%
Undergraduate	45	54.22%
Diploma	25	30.12%
Certificate	0	0.00%
Any other (specify)	0	0.00%
TOTAL	83	S100%

Table 4.3 show that all the respondents had attained a minimum of a diploma qualification where 13 (15.66%) had attained a post graduate degree, 45 (54.22%) had attained undergraduate degree while 25 (30.12%) had a diploma. This presented an average sample population which had appropriate academic qualification necessary for the study.

4.3.4 Work Experience of the respondents

The study sought to establish the duration onto which the respondents had served in their current positions as at the time of this study. This could be of significance in correlating the responses with experience of the respondent. The figure 4.2 below represents the work experience of respondents in years.

Figure 4.2 Work experience of the respondents

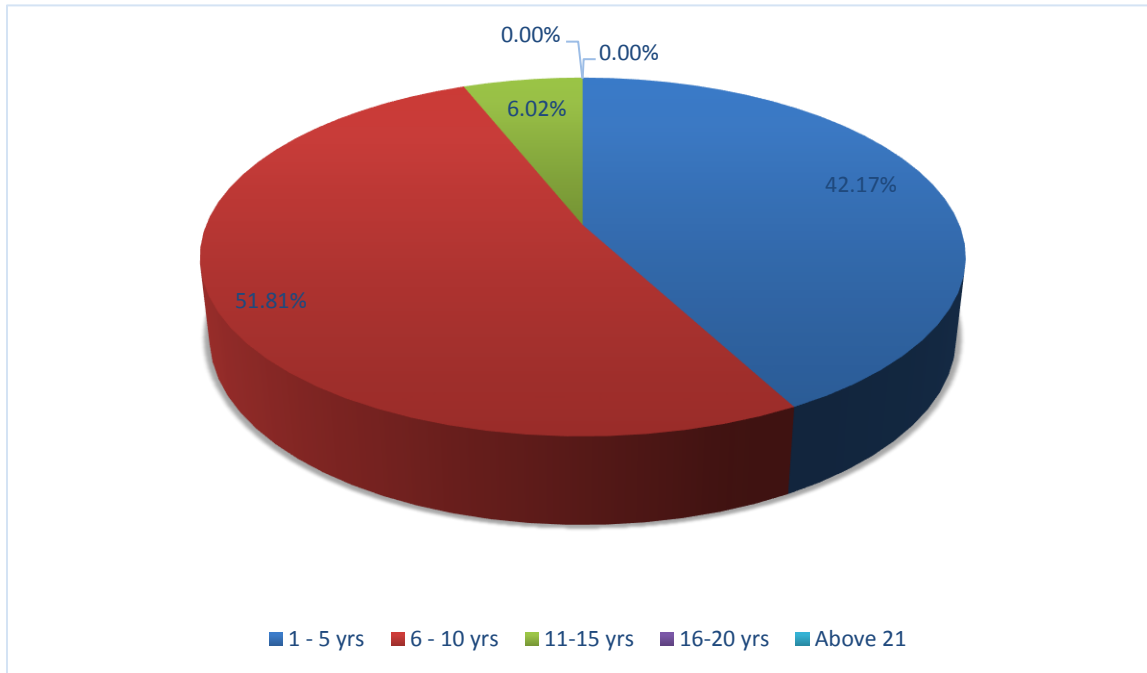


Figure 4.2 above shows that most of the respondents had a work experience of between 6 years to 10 years that is 43 respondents (51.81%) while those who had been in their positions as at the time of study for a period of 1 to 5 years were 35 (42.17%). Similarly, those who had been in the job for a longer period of between 11 to 15 years were 5 (6.02%) However, it was observed that in all the day schools in Imenti North Sub County there were no respondents who had been there for more than 15 years. This could be as a result of job promotions in the case of school principals by the Teachers Service Commission (TSC) and the recent government policy to delocalize teachers.

4.4 School management and Completion of construction projects

The first research question was for the study to determine whether school management had any influence on completion of construction projects in Public day Secondary schools in Imenti North Sub-County.

4.4.1 Extent on which the school management influences completion of construction projects

The question sought to establish the magnitude onto which the school management influenced completion of construction projects in public day secondary schools in Imenti North Sub County. The responses were represented on a nominal scale of 1 to 5, where; 5 – Very great extent, 4 – Great extent, 3 – Moderate extent, 2 – Low extent and 1 – Very low extent. Table 4.4 shows the outcome from the questionnaires.

Table 4.4 Extent on which school management influence completion of projects

Description of response	Frequency	Percentage
Very great extent [5]	18	21.69%
Great extent [4]	32	38.55%
Moderate extent [3]	22	26.51%
Low extent [2]	8	9.64%
Very low extent [1]	3	3.61%
TOTAL	83	100%

From table 4.4, most of the respondents had the opinion that school management played a major role in completion of construction projects. 32 of them (38.55%) agreed that management influences the completion to a great extent while 18 (21.69%) emphasized that management influenced to a very great extent. Implying that, the completion of the projects depends on the school management. However, a few of the respondents 8 (9.64%) and 3 (3.61%) felt that the school management influenced the completion to a low extent and very low extent respectively.

4.4.2 Extent on which school management indicators influence completion of projects

The study sought to establish on the extent onto which the given management indicators such as coordination and planning, allocation of resources, conflict resolution and leadership skills influence the completion of projects. The responses were represented on a nominal scale of 1 to 5, where; 5 – Very great extent, 4 – Great extent, 3 – Moderate extent, 2 – Low extent and 1 – Very low extent. Table 4.5 shows the responses given.

Table 4.5 Extent on which school management indicators influence completion of projects

Category of Indicators		[5]	[4]	[3]	[2]	[1]	TOTAL
Coordination and planning	Frequency	32	25	18	7	1	83
	Percentage(%)	38.6	30.1	21.7	8.4	1.2	100%
Allocation of resources	Frequency	33	28	19	3	0	83
	Percentage(%)	39.8	33.7	22.9	0.4	0.0	100%
Conflict resolution	Frequency	10	14	36	15	8	83
	Percentage(%)	12.0	16.9	43.4	18.1	0.1	100%
Leadership skills	Frequency	24	38	16	3	2	83
	Percentage(%)	28.9	45.8	19.3	0.4	0.2	100%

According to the study findings as depicted in tables 4.4 and 4.5, school management could influence the completion rate of construction projects through various fronts. For instance, most of the respondents, 32 (38.55%) and 18 (21.69%) that good or poor school management skills could influence the completion of school projects to great and very great extent respectively. Andawei, (2012) in their study also found that construction productivity is influenced by many factors, including material, equipment, tools, construction methods and management skills in terms of adequacy and accurate application.

The study also found that inappropriate coordination and planning as a result limited knowledge, experience and expertise among the school managers may lead to significant problems in successive stages of the project which would lead to incompleteness of the projects. This was confirmed by most of the respondents at 30.1% and 38.6% who agreed that coordination and planning affects completion of projects to a great and very great extent respectively. Dainty et al. (2002) and Cooke-Davis (2001) declared that project management competence is one of many criteria upon which project performance is contingent.

Based on allocation of resources, majority of the respondents (39.8%) agreed that most of the projects in public day secondary schools remained stalled due to poor allocation of resources. The study identified from the opinion given by most respondents that failure to prioritize projects in order of urgency and need among the school management led to most of the projects remaining incomplete. Proper allocation of resources in construction is critical to ensure quality products and timely delivery of project. This was echoed by one of the principal's sentiments that "appropriate allocation of resources will enhance quick completion of school projects"

Conflict resolution skills among the school project managers also influences the completion of projects to a moderate extent as supported by most respondents (43.4%). However a few of the respondents, 8 (0.1%) felt that conflict resolution had no impact on the completion of construction projects in schools.

On leadership skills majority of the respondents 45.8% and 28.9% agreed that good leadership skills could result to completion of school projects in time while poor leadership skills could result to stalling of projects.

4.5 Budget allocation and completion of construction projects

This was the second research question which sought to determine whether the budget allocation had any influence on completion of construction projects in Public day Secondary schools in Imenti North Sub-County. The findings from the respondents were as follows;

4.5.1 Extent on which the budget allocation influences completion of construction projects

The question sought to establish the magnitude onto which the budget allocation influenced completion of construction projects in public day secondary schools in Imenti North Sub County. The responses were represented on a nominal scale of 1 to 5, where; 5 – Very great extent, 4 – Great extent, 3 – Moderate extent, 2 – Low extent and 1 – Very low extent. Table 4.6 shows the outcome from the questionnaires.

Table 4.6 Extent on which budget allocation influence completion of projects

Description of response	Frequency	Percentage
Very great extent [5]	30	36.14%
Great extent [4]	26	31.33%
Moderate extent [3]	22	26.51%
Low extent [2]	4	4.82%
Very low extent [1]	1	1.20%
TOTAL	83	100%

(Source; Researcher's data 2018)

From table 4.6, most of the respondents had the opinion that budget allocation played a major role in completion of construction projects. 30 of them (36.14%) agreed that budget allocation influences the completion of projects to a very great extent while 26 (31.33%) agreed that budget allocation influenced completion of projects to a great extent. However, a few of the respondents 4 (4.82%) and 1 (1.20%) felt that the budget allocations influenced the completion of projects to a low extent and very low extent respectively.

4.5.2 Extent onto which budget allocation indicators influence completion of construction projects

The study sought to determine on what extent the given highlighted budget allocation indicators such as availability of finances, adequacy of finances, source of finance and disbursement channels of finances influence the completion of construction projects. The responses were represented on a nominal scale of 1 to 5, where; 5 – Very great extent, 4 – Great extent, 3 – Moderate extent, 2 – Low extent and 1 – Very low extent. Table 4.7 shows the distribution of responses given.

Table 4.7 Extent on which budget allocation indicators influence completion of projects

Category of Indicators		[5]	[4]	[3]	[2]	[1]	TOTAL
Availability of finances	Frequency	42	35	6	0	0	83
	Percentage(%)	50.6	42.2	7.2	0.0	0.0	100%
Adequacy of finances	Frequency	42	35	6	0	0	83
	Percentage(%)	50.6	42.2	7.2	0.0	0.0	100%
Source of finances	Frequency	3	6	26	28	20	83
	Percentage(%)	3.6	7.2	31.3	33.7	24.1	100%
Disbursement channels	Frequency	24	26	10	5	18	83
	Percentage(%)	28.9	31.3	12.0	6.0	21.7	100%

From table 4.7, it was noted from various respondents (more than 50.6%) that completion of construction projects in public day secondary schools relied heavily on availability of finances and adequacy of the same finances. This is because most of the respondents felt that the incomplete projects was simply due to unavailability and inadequacy of the allocated finances.

On contrary, some of the respondents (24.1%) felt that source of finances didn't influence completion of construction projects. From the explanation given by some of the principals, they argued that it didn't matter where the construction funds came from, only its availability and adequacy that determined completion of projects.

One of the principal said, "it doesn't matter if the source of finance is from the parents, CDF or donations from non-governmental organisations. All that mattered is availability and adequacy of the finances"

The same sentiments were noted from some of the respondents when they held their opinion that it didn't matter how finances were disbursed or the disbursement channels all that determined completion of construction projects was the availability and adequacy of finances.

4.6 Project Planning and Completion of Construction projects

The other research question was meant for the study to establish how project planning influenced completion of construction projects in Public day Secondary schools in Imenti North Sub-County of Meru County

4.6.1 Extent onto which Project planning influences completion of construction projects in Public day secondary schools

The question sought to determine the degree onto which project planning influenced completion of construction projects in public day secondary schools in Imenti North Sub County. The responses were represented on a nominal scale of 1 to 5, where; 5 – Very great extent, 4 – Great extent, 3 – Moderate extent, 2 – Low extent and 1 – Very low extent. Table 4.8 shows the outcome from the questionnaires.

Table 4.8 Extent on which project planning influence completion of projects

Description of response	Frequency	Percentage
Very great extent [5]	20	24.10%
Great extent [4]	26	31.33%
Moderate extent [3]	30	36.14%
Low extent [2]	7	8.43%
Very low extent [1]	0	0.00%
TOTAL	83	100%

From table 4.8, most of the respondents had the opinion that project planning played a major role in completion of construction projects. 26 of them (31.33%) agreed that project planning influences the completion of projects to a great extent while 20 (24.10%) emphasized that project planning influenced to a very great extent. Most of the respondents agreed that if the project had good planning it would be completed in time while if the planning wasn't good, this contributed to most of the projects being abandoned at some stage. However, some of the respondents 30 (36.14%) and 7 (8.43%) felt that project planning influenced the completion of projects to a low extent and very low extent respectively.

One of the BOM chairpersons (BOM 7) said that “Proper project planning interms of good allocation of resources and organization of those resources, would definitely lead to early completion of construction projects in day schools”

4.6.2 Extent onto which project planning indicators influence completion of construction projects

This question sought to determine on what extent the given indicators such as the project scope plan, cost estimates, quality management plan and human resource plan influence the completion of construction projects. The responses were also represented on a nominal scale of 1 to 5, where; 5 – Very great extent, 4 – Great extent, 3 – Moderate extent, 2 – Low extent and 1 – Very low extent. Table 4.9 shows the distribution of responses given.

Table 4.9 Extent on which project planning indicators influence completion of projects

Category of Indicators		[5]	[4]	[3]	[2]	[1]	TOTAL
Project scope plan	Frequency	2	14	32	24	11	83
	Percentage(%)	2.41	16.87	38.55	28.92	13.25	100%
Project cost estimates	Frequency	8	10	25	26	14	83
	Percentage(%)	9.64	12.05	30.12	31.33	16.87	100%
Quality management plan	Frequency	37	35	11	0	0	83
	Percentage(%)	44.58	42.17	13.25	0.00	0.00	100%
Human resource plan	Frequency	20	26	24	13	0	83
	Percentage(%)	20.10	31.33	28.92	15.66	0.00	100%

From table 4.9, 2 (2.41%) of respondents had the feeling project scope plan could influence project completion to a very large extent, While 32 (38.55%) and 14 (16.87%) felt that project scope planning influenced completion of construction projects to a moderate and great extent respectively. However, 11 (13.25%) and 24 (28.92%) felt that project scope determined completion of projects to a very low and low extent respectively.

On project estimates, most of the respondents felt that cost estimates didn't influence completion of projects to a large extent. Only 8 (9.64%) had the opinion that cost estimates of the projects influenced their completion.

On quality management plan, majority of the respondents 37 (44.58%) and 35 (42.17%) felt that quality management was a key factor in completion of projects to a very great and great extent respectively. Kaming et al, (2007) also found that quality management during construction ensure timely completion of a quality project.

On human resource plan, 26 (31.33%) and 20 (20.10%) of respondents felt that completion of projects in day secondary schools was influenced by the planning of human resource to a great and very great extent respectively. This represented almost 50% of the total number of respondents.

From the sentiments of one of the principals(12) he stressed that “Proper project planning in terms of having a good project scope, proper cost estimates of the materials needed, ensuring quality management and ensuring appropriate human resource, would lead to timely completion of quality projects”

4.7 Monitoring and Evaluation and Completion of Construction projects

This was the last research question that was meant to establish how monitoring and evaluation influenced completion of construction projects in Public day Secondary schools in Imenti North Sub-County of Meru County

4.7.1 Extent onto which Monitoring and evaluation influences completion of construction projects in Public day secondary schools

The question sought to determine the extent onto which monitoring and evaluation influenced completion of construction projects in public day secondary schools in Imenti North Sub County. The responses were represented on a nominal scale of 1 to 5, where; 5 – Very great extent, 4 – Great extent, 3 – Moderate extent, 2 – Low extent and 1 – Very low extent. Table 4.10 shows the outcome from the questionnaires.

Table 4.10 Extent on which Monitoring and evaluation influence completion of projects

Description of response	Frequency	Percentage
Very great extent [5]	20	24.10%
Great extent [4]	25	30.12%
Moderate extent [3]	31	37.35%
Low extent [2]	5	6.02%
Very low extent [1]	2	2.41%
TOTAL	83	100%

From table 4.10, 20 (24.10%) of the respondents had the opinion that monitoring and evaluation influenced completion of projects to a very large extent. This was based on the idea of most of them that for timely completion of quality projects, there should be close monitoring of the usage and utilization of resources. 31 (37.35%) and 25 (30.12%) withheld similar sentiments as they agreed that monitoring and evaluation influenced the completion of projects to a moderate and great extent respectively. However only 2 (2.41%) and 5 (6.02%) of the respondents said that monitoring and evaluation influenced to a very low and low extent respectively.

4.7.2 Extent onto which Monitoring and evaluation indicators influence completion of construction projects

This question sought to determine on what extent the given indicators such as project progress report, project duration, team interactions and meetings and minutes influence the completion of construction projects. The responses were also represented on a nominal scale of 1 to 5, where; 5 – Very great extent, 4 – Great extent, 3 – Moderate extent, 2 – Low extent and 1 – Very low extent. Table 4.11 shows the distribution of responses given.

Table 4.11 Extent on which monitoring and Evaluation indicators influence completion of projects

Category of Indicators		[5]	[4]	[3]	[2]	[1]	TOTAL
Project progress report	Frequency	2	4	30	37	10	83
	Percentage(%)	2.41	4.82	36.14	44.58	12.05	100%
Project duration	Frequency	4	6	30	35	8	83
	Percentage(%)	4.82	7.23	36.14	42.17	9.64	100%
Team interactions	Frequency	39	33	10	1	0	83
	Percentage(%)	46.99	39.76	12.05	1.20	0.00	100%
Meetings and minutes	Frequency	8	16	14	43	2	83
	Percentage(%)	9.64	19.28	16.87	51.81	2.41	100%

From table 4.11, only 4 (4.82%) and 2 (2.41%) of the respondents who felt that project progress report could influence the project completion to a large and very large extent respectively. This is because as one of the BOM 9 argued, there being a progress report or not, the completion of the

project wouldn't be affected. However, most of the other respondents felt that the progress report could influence to certain extent the completion of the projects. This is because there those who said that if the report could be available, the relevant stakeholders could evaluate the timelines of completion of the project and act accordingly.

On project duration, since the whole study is to seek reasons why most of the construction projects stayed longer than the estimated time in public day schools, the respondents mostly felt that this didn't influence their completion to a very large extent. 6 (7.23%) and 4 (4.82%) of the respondents said that the project duration set influenced the completion of projects to a large and very large extent respectively. While 35 (42.17%) and 30 (36.14%) said that project duration set influenced their completion to a low and moderate extent respectively. However 8 (9.64%) of the respondents had the opinion that project duration affect completion of projects to a very low margin.

On team interactions, most of the respondents 33 (39.76%) and 39 (46.99%) felt that team interactions was an important element in completion of projects to a great and very great extent respectively. The respondents had the opinion that when various players come together in the construction of projects, they are likely to be completed in time. But when there is disharmony between the players, projects are likely to be abandoned incomplete.

On meetings and minutes, the respondents had various opinions concerning how this influenced the completion of projects. 16 (19.28%) and 8 (9.64%) of respondents felt that completion of projects in day secondary schools was influenced by various meetings that were held by the stake holders facilitating the construction and the minutes taken to ensure implementation to a great and very great extent respectively. However most of the respondents consisting of more than 50% agreed that various meetings and their minutes as a way of fact-finding and team interactions, influenced how projects were to be completed. Only 2 (2.41%) of the respondents that felt meetings and minute had a small influence in the completion of construction projects.

4.8 Spearman's rank correlation of different variables

Spearman's rank correlation was used in this study to determine the strength of association between variables of interest on how they influence completion of construction projects in public day secondary schools.

The Spearman's rank correlation model that was employed and adopted for this study was the following;

$$r_s = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

Where;

d = u – v (the difference between rank of the paired variables)

n = the number of pairs of the variables

r_s is the spearman's rank which lies between -1 and +1 inclusive

-1 – Perfect negative correlation

-0.5 – Moderate negative correlation

0 – No correlation

0.5 – Moderate positive correlation

1 – Perfect positive correlation

Table 4.12 Spearman's rank correlation between the school management and budget allocation on their influence to completion of projects

Extent of influence to completion of projects	School management (u)	Budget allocation (v)	d=u-v	d ²
Very great	18	30	-12	144
Great	32	26	6	36
Moderate	22	22	0	0
Low	8	4	4	16
Very low	3	1	2	4
	n = 83	n = 83		∑d ² = 200

$$r_s = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

$$1 - \frac{6 \times 200}{83(83^2 - 1)}$$

$$1 - 0.002 = 0.998$$

Conclusion; there was a perfect positive correlation between the two variables.

Table 4.13 Spearman's rank correlation between the project planning and monitoring and evaluation on their influence to completion of projects

Extent of influence to completion of projects	Project planning (u)	Monitoring and evaluation (v)	d=u-v	d ²
Very great	20	20	0	0
Great	26	25	1	1
Moderate	30	31	-1	1
Low	7	5	2	4
Very low	0	2	-2	4
	n = 83	n = 83		∑d ² = 10

$$r_s = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

$$1 - \frac{6 \times 10}{83(83^2 - 1)}$$

$$1 - 0.0001 = 1.00$$

Conclusion; there was a perfect positive correlation between the two variables.

CHAPTER FIVE: SUMMARY OF THE FINDINGS, DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of the findings, discussions, conclusions, recommendations and suggestions for further study. The study sought to investigate the institutional factors influencing completion of construction projects in public day secondary schools. The study objectives were; To examine the influence of school management on completion of construction projects in public day secondary schools, To establish influence of budgeting allocation on completion of construction projects in public day secondary schools, To determine how project planning influences completion of construction projects in public day secondary schools and to assess how monitoring and evaluation influences completion of construction projects in public day secondary schools in imenti north Sub County.

5.2 Summary of findings

A total of 90 questionnaires were distributed to the respondents. 83 of them responded representing a response rate of 92.22%. Quantitative data was organized in frequency counts and converted into percentages for clear interpretation. From the findings, most of the respondents were males (81.93%), while female respondents were few (8.07%). This implied a little bit that females didn't have most of the leadership roles in the management of public day secondary schools in Imenti North Sub County. Majority of the respondents were aged above 40 years (60.24%) representing a well experienced population which was an important factor in this study. The respondents between 26-30 years were not many (2.41%). Most of the respondents were graduates representing a 54.22% which was above average. Most of the respondents had average working experience of between 6-10 years comprising 51.81%.

5.2.1 Extent onto which the school management influences completion of construction projects

It was observed from the findings that most of the respondents had the opinion that school management played a major role in completion of construction projects. 32 of them (38.55%) agreed that management influences the completion to a great extent while 18 (21.69%) emphasized that management influenced to a very great extent. However, a few of the respondents 8 (9.64%) and 3 (3.61%) felt that the school management influenced the completion to a low extent and very low extent respectively. 30.1% and 38.6% said that coordination and planning affects completion of projects to a great and very great extent respectively. 7 (8.4%) and 18 (21.7%) of the respondents said coordination and planning affects completion of projects to low and moderate extent respectively. On the other hand, 1 (1.2%) of the respondent said it affects completion of projects to a very low extent.

On allocation of resources, 28 (33.7%) and 33 (39.8%) said it influenced completion of projects at a great and very great extent respectively. 3 (0.4%) and 19 (22.9%) agreed that it influenced at low and moderate extent respectively. On conflict resolution, 14 (16.9%) and 10 (12.0%) said it influenced completion of projects at a great and very great extent respectively while 15 (18.1%) and 36 (43.4%) said it influenced at a low and moderate extent respectively. However, 8 (0.1%) said that conflict resolution affected completion of projects at a very low extent. About leadership skills, 38 (45.8%) and 24 (28.9%) said that it affected completion of projects at great and very great extent respectively While 3 (0.4%) and 16 (19.3%) said that leadership skills influenced completion of projects at a low and moderate extent respectively. However 2 (0.2%) of the respondents said that having leadership skills affected completion of projects at a very low extent.

5.2.2 Extent onto which budget allocation influence completion of projects

When asked how budget allocation influenced completion of projects, 26 (31.33%) and 30 (36.14%) of the respondents said that it influenced at great and very great extent respectively. While, 4 (4.82%) and 22 (26.51%) agreed that budget allocation influenced at a low and moderate extent respectively. However, 1 (1.20%) respondent said that budget allocation influenced completion of projects at a very low extent.

On availability of finances and adequacy of finances, Similar responses were given where, 35 (42.2%) and 42 (50.6%) of the respondents said that the two indicators influenced completion of projects at a great and very great extent respectively. The remaining 6 (7.2%) respondents agreed that they affected at a moderate extent. On sources of finances, 6 (7.2%) and 3 (3.6%) of the respondents said that it affected the completion of projects at a great and very great extent respectively. However majority comprising 28 (33.7%) and 26 (31.3%) had the opinion that sources of finances influenced at a low and moderate extent While 20 (24.1%) respondents said that it affected completion of projects at a very low extent. On disbursement channels, mixed reactions was observed where 26 (31.3%) and 24 (28.9%) said this influenced the completion of projects to a great and very great extent respectively. 5 (6.0%) and 10 (12.0%) said it influenced at a low and moderate extent respectively while 18 (21.7%) respondents said that this factor had a very low influence on the completion of projects.

5.2.3 Extent onto which project planning influence completion of projects

The findings onto this question was that 26 (31.33%) and 20 (24.10%) of the respondents said that project planning influenced completion of projects to a great and very great extent respectively While for the remaining respondents, 7 (8.43%) and 30 (36.14%) had the opinion that it influenced at a low and moderate extent respectively. On project scope plan, 14 (16.87%) and 2 (2.42%) respondents said it influenced completion of projects at great and very great extent respectively. 24 (28.92%) and 32 (38.55%) said it influenced at a low and moderate extent respectively. However, 11 (13.25%) respondents said project scope plan influenced completion of projects at a very low extent. On projects cost estimates, 10 (12.05%) and 8 (9.64%) said that it affected completion of projects at a great and very great extent respectively. 26 (31.33%) and 25 (30.12%) said it affected at a low and moderate extent respectively. However, 14 (16.87%) said it affected at a very low extent. On quality management plan, 35 (42.17%) and 37 (44.58%) of the respondents said this influenced completion of projects at a great and very great extent respectively While 11 (13.25%) had the opinion that it influenced at a moderate extent. No respondents had a different opinion. On human resource plan, 26 (31.33%) and 20 (20.10%) said that it influenced completion of projects at a great and very great extent respectively While 13(15.66%) and 24(28.92%) said it influenced at a low and moderate extent respectively.

5.2.4 Extent onto which monitoring and evaluation influence completion of projects

When asked how monitoring and evaluation influenced completion of projects, 20 (24.10%) of the respondents said that monitoring and evaluation influenced completion of projects to a very large extent. On the other hand, 31 (37.35%) and 25 (30.12%) withheld similar sentiments as they agreed that monitoring and evaluation influenced the completion of projects to a moderate and great extent respectively while 5(2.41%) said it influenced at a low extent. However, 2 (2.41%) said it influenced at a very low extent. On project progress report, 4(4.82%) and 2(2.41%) said it influenced completion of projects at a great and very great extent respectively. 37(44.58%) and 30(36.14%) said it influenced completion of projects at a low and moderate extent respectively. However, 10 (12.05%) said it influenced at a very low extent. On project duration, 6(7.23%) and 4(4.82%) said it influenced completion of projects at great and very great extent respectively. 35(42.17%) and 30(36.14%) said it affected at low and moderate extent respectively While 8(9.64%) said it influenced at a very low extent. On team interactions, majority 33(39.76%) and 39(46.99%) said it influenced at a great and very great extent respectively and 10(12.05%) said it influenced at a moderate extent. Only 1(1.20%) said the indicator influenced at a low extent. On meetings and minutes, 16(19.28%) and 8(9.64%) said it influenced at a great and very great extent respectively while 43(51.81%) and 14(16.87%) said it influenced at a low and moderate extent respectively. However, 2(2.41%) respondents said the indicator influenced at a very low extent

5.3 Discussion of findings

The study sought to establish institutional factors that influenced completion of construction projects in public day secondary schools in Imenti North Sub County. The following is the overview of the findings.

5.3.1 School management and completion of construction projects

From all the institutional factors that were analyzed, the school management stood out to be one of the main factors that could likely lead to completion or incompleteness of construction projects in public day secondary schools. This is as was shown from the findings where 32 of the respondents (38.55%) agreed that management influences the completion to a great extent while 18 (21.69%) emphasized that management influenced to a very great extent. However, a few of

the respondents 8 (9.64%) and 3 (3.61%) felt that the school management influenced the completion to a low extent and very low extent respectively. It was the opinion of the most respondents that appropriate management could lead to timely completion of quality projects. This would range from having good allocation of resources, good coordination and planning, good skills of conflict resolution and good leadership skills. Considering the principal as a project manager, one is expected to plan, implement, manage, maintain and evaluate the entire education system physical facilities, human resource, students, financial inputs and the curriculum then we see the need for adequate preparation of school heads in project management during the construction of infrastructural facilities. Effective execution of school management tasks requires that principals be adequately trained. However as pointed out by Okumbe (2008), most of the school principals are appointed from the serving teachers and this may mean some limited skills in management. As Olembo (2012) and Okumbe (2008) noted, little orientation is given as to the nature of the work they are supposed to do as education programme managers. Hence, this may be the reason why most schools in our country have stalled projects, dilapidated structures, and register poor academic performance. It is not an easy task to measure the effectiveness of project management in a school setting. This, according to Okumbe (2008), is mainly because different schools have different financial capabilities, and resource distribution in different schools varies. As such, the study measured principals' perceived effectiveness in project management.

Katz (1974) proposed that managers need three critical skills in managing: technical, human, and conceptual skills. Technical skills are the job-specific knowledge and techniques needed to proficiently perform work tasks. These skills tend to be more important for first line managers because they typically are managing employees who use tools and techniques to produce the organization's products or service the organization's customers Robbins & Coulter (2012).

Several studies have therefore, identified management and leadership related factors to cause delays in completion of school construction projects. Kerzner, (2008) assert that incomplete drawings, late issuance of instructions and inadequate supervision critically impacted on delays in construction projects in public learning institution. Kumar and Prasard, (2013) concluded that inadequate site supervision by the school managers was the major cause of delay in completing school constructions. Pongpeng and Liston, (2013) identified delays in approving major changes

in the scope of works, inadequate experience of the school managers and late in reviewing design documents as critical. In a separate study in United States, Arditi and Mochtar (2010) identified delays in design work and inadequate site inspection as the main causes of management related delays. They further identified design errors made by designers, changes in types and specifications during construction, insufficient communication between owner and consultant during design stage as critical. In another study conducted by Chan and Kumaraswamy (2007) in country, the study identified delays in design information, inadequate design team experience and mistakes and discrepancies in design documents as some of the management related factors causing delays in completion of school projects. In a separate study, El-Razek et al., (2008) concluded that design changes during construction, changes in material types and specifications during construction and design errors made by designers contributed to delays in project completion.

These findings are also supported by Lock (2007) who also found that problems of poor contract management, mistakes and discrepancies in contract documents and inspection and testing of completed portions of work as key causes of management related delays in completing school projects.

5.3.2 Budget allocation and completion of construction projects

On budget allocation, this an area that most of the respondents felt it also greatly influenced the completion of projects to various extents. This is statistically proven; 26 (31.33%) and 30 (36.14%) of the respondents said that it influenced at great and very great extent respectively. While, 4 (4.82%) and 22 (26.51%) agreed that budget allocation influenced at a low and moderate extent respectively. However, 1 (1.20%) respondent said that budget allocation influenced completion of projects at a very low extent. More so on availability and adequacy of funds set for projects, it was identified as a key factor to completion of projects. With the introduction of free secondary education, schools get some funding from the government while parents are required to meet various other costs such as school development projects and boarding fees (Republic of Kenya, 2005). Head teachers play a major role in the management of all school financial activities, which involve the disbursement of money. The money is obtained through various sources such as fees. (Orlosky 1984) states that financial management determines the way the school is managed and whether or not the school will meet its objectives.

The head teacher is responsible for budgeting, accounting and auditing functions of financial management.

5.3.3 Project planning and completion of construction projects

On project planning, the responds showed that project planning is a major factor too in completion of construction projects this is as shown from the statistics obtained where 26 (31.33%) and 20 (24.10%) of the respondents said that project planning influenced completion of projects to a great and very great extent respectively While for the remaining respondents, 7 (8.43%) and 30 (36.14%) had the opinion that it influenced at a low and moderate extent respectively. For every successful project, good planning is key. This may entail having a good project scope, accurate project cost estimates, quality management plan and good human resource plan. Failure to all these variables in project planning, was found to have contributed to incompleteness of projects. Thomas, et al (2008) observes very well that “the most effective team cannot overcome a poor project plan” and projects started down the wrong path can lead to the most spectacular project failures. Morris (1998: 5) similarly argued that “The decisions made at the early definition stages set the strategic framework Get it wrong here, and the project will be wrong for a long time”. Munns and Bjeirmi (1996) state that for a project which is flawed from the start, successful execution may matter to only to the project team while the wider organization will see the project as a failure. (Blomquist et al 2010) state “Plans are a cornerstone of any project; consequently, planning is a dominant activity within a project context.” This is a recurring theme: planning is inherently important to project success or one could argue project management would not exist. Project management has a long history in the construction industry and there have been a number of studies in the construction project management field on the relationship between planning and project success: this is a well-studied area in comparison to other industries or other areas in project management. Hamilton and Gibson (1996) found that an increase in pre-project planning for construction projects increased the likelihood of a project meeting financial goals. The top third of projects from a planning completeness perspective had an 82% chance of meeting those goals while only 66% of projects in the lower third did (a difference of 16%). Similar results are seen for schedule and design goals. Shehu and Akintoye (2009) found in a study of programme management in the

construction industry that effective planning had the highest criticality index of .870 of all the Critical Success Factors (CSF) studied

5.3.4 Monitoring and Evaluation and completion of construction projects

On this factor, to some extent, most of the respondents agreed that good monitoring and evaluation skills of construction projects would lead to their timely completion. However, if there was no close monitoring and evaluation of construction projects, they would be left incomplete at some point. This was statistically shown from the findings where 20 (24.10%) of the respondents said that monitoring and evaluation influenced completion of projects to a very large extent. On the other hand, 31 (37.35%) and 25 (30.12%) withheld similar sentiments as they agreed that monitoring and evaluation influenced the completion of projects to a moderate and great extent respectively while 5(2.41%) said it influenced at a low extent. However, only 2 (2.41%) said it influenced at a very low extent.

As pointed out earlier, In Kenya, studies carried out show that quite a number of projects have been successful. This is according to (Kimando, 2013). On the other hand, several projects in Kenya have been cited as failed projects; meaning that they did not achieve success. Some studies show that one of the drawbacks of monitoring and evaluation in Kenya is failure by the management to implement the recommendations offered by the monitoring and evaluation team (Ochieng, Odeh, and Battaineh, 2012). Effective monitoring and evaluation of projects is usually one of the ingredients of good project performance. It provides means of accountability, demonstrating transparency to the stakeholders and facilitates organizational learning through documenting lessons learned in the implementation of the project and incorporating the same in the subsequent project planning and implementation or through sharing experiences with other implementers.

According to Lock (2000), once the project is on, monitoring and measurement of progress has to be carried out to ascertain the quality of workmanship, materials and building methods. The chairman or project manager bears responsibility for the conduct of meetings relating to the project. Progress reports addressed to management will have to set out the technical fulfillment and financial status of the project, and compare the performance in each of these respects with the scheduled requirement. Such reports are usually issued at regular intervals, and they may

well be presented by the project manager during the course of project review meetings. Lack of adequate monitoring and evaluation expertise or capacity among the local management is one area that has been highlighted by several scholars among them (Hughes 2002). Monitoring and evaluation requires specific skills and expertise such as monitoring and evaluation design skills particularly log frame design, indicator setting: both qualitative and quantitative, design of data collecting instruments including questionnaires, focus discussion guides. Lack of all these skills of monitoring and evaluating construction projects will likely lead to incompleteness of projects.

5.4 Conclusion of the study

From the study, it can be concluded that the institutional factors investigated that is; the school management, budgeting allocation, Project planning and Monitoring and evaluation, had an influence on the completion of construction projects in public day secondary schools in Imenti north Sub County of Meru County. It was observed that all the factors discussed had influence but the most outstanding factor from the findings was the school management. It was statistically shown that effective school management could lead to timely completion of quality projects while ineffective school management could result to abandonment of construction projects to some extent. The findings showed that there was a significant relationship between three independent variables and successful completion of projects. The findings on financial availability further supported the previous studies which stated that financial unavailability and inadequacy are the major cause of abandonment of works in construction projects leading to delay in the timely completion of projects. This study in particular showed that the public day secondary schools in Imenti north Sub County lacks adequate project management skills for school principals, adequate funds, poor project planning skills and monitoring and evaluation skills required to successfully complete construction projects.

On budgetary allocations as a key variable that was observed to influence completion of projects, it was identified from this study that, Government procedures for disbursement of funds are bureaucratic and thus most projects once approved by BOM await a longer period before actual release of funds was undertaken though the current study disputes on availability of financial resources and equipment. Appropriate funding and correct means of disbursement of funds would lead to timely completion of construction projects.

It was observed also that inappropriate project planning in terms of having a poor project scope, an inaccurate project cost estimates and a poor quality management plan and poor human resource plan are all the factors that contribute to delay of construction projects. A good project planning will lead to timely completion of quality projects.

Finally, the findings showed that having close monitoring and continuous evaluation of the projects by the project managers and other stake holders, could lead to timely completion of the projects.

5.5 Recommendations

From this study, the following recommendations have been derived to improve on the timely and successful completion of construction projects in public day secondary schools:

1. On the school management, the government through the Teachers Service Commission, should enable proper school management in public day secondary schools in Kenya. This is by including other mechanisms of selecting the school principals apart from just picking them from the classroom teacher. This may be for instance considering those teachers who have gone for further studies like post graduate courses especially in project planning and management in recognized universities. This would bring professional management in public day schools. Also to ensure competent board of management (BOM)
2. The government also through the Teachers Service Commission to ensure occasional training and refresher courses of school principals on project management skills and financial accounting and auditing skills in order to achieve proper project financial controls.
3. The Government through the concerned Ministry and Departments like CDF should re-look at the procedure or process of remitting funds for public day secondary schools construction projects with a view to reducing the time it takes to commence after approval has been granted.

4. Proper project plan should be put in place before the start of actual construction. It should be put clear for instance that the the CDF construction projects should be completed once they have been started regardless of the Member of Parliament who takes over from the forma
5. Monitoring and reporting mechanisms on the ongoing construction projects should be done regularly.

5.6 Suggestions for Further Research

The study was conducted in Imenti North sub-county, Meru County, Kenya. The following observations were noted for further research;

1. Future studies could include other factors that affect completion of construction projects in public day secondary schools in different sub-counties.
2. It is also suggested that a comparative study could be done with public primary schools in the same sub-county, county and other counties in Kenya.
3. A similar study should be conducted which would investigate how institutional factors and other factors would influence the completion of construction projects in other institutions like the universities in Meru County and elsewhere in Kenya and in other government ministries.

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APPENDICES

APPENDIX I: LETTER OF TRANSMITTAL OF INSTRUMENTS

Bundi Shadrack

University of Nairobi

P O Box 3279 – 00100,

Meru.

Dear Respondent,

RE: REQUEST FOR RESEARCH DATA.

I am a graduate student at University of Nairobi. In partial fulfillment for the award of a Master of Arts Degree in Project Planning and Management, I am carrying out a research study on **INSTITUTIONAL FACTORS INFLUENCING COMPLETION OF CONSTRUCTION PROJECTS IN PUBLIC DAY SECONDARY SCHOOLS**

You have been identified as one of the people that could be of assistance with the research and I thus request your participation in the research. Essentially, you would be required to complete a questionnaire. You will be treated anonymously and your responses will be treated with utmost confidentiality. The information you provide will be used only for academic purposes.

Yours Faithfully,

Bundi Shadrack

Thank you in advance.

**APPENDIX II:
QUESTIONNAIRE FOR SCHOOL PRINCIPALS, BOM CHAIRPERSONS AND
BURSARS**

Good morning/afternoon Sir/ Madam;

This questionnaire is intended to get information on project at your schools for academic purposes. The research is investigating institutional factors influencing Completion of Construction Projects in day Secondary Schools in Imenti North Sub-County, Meru County. Please answer the questions objectively and truthfully as possible. Do not write your name anywhere in the questionnaire. Provide information as accurately as possible for it to be useful in this study. Use a tick (✓) to indicate your response where appropriate.

PART A: BACKGROUND INFORMATION

1. What is your gender?

Male [] Female []

2. How old are you?

26-30 []

31-35 []

36-40 []

Above 40 []

3. Which is your highest level of education?

Post Graduate []

Undergraduate []

Diploma []

Certificate []

Any other (specify).....

4. How long have you served in your current position?

1 to 5 years []

6 to 10years []

11 to 15 years []

16 to 20 years []

21 years and above []

PART B: School Management and completion of construction projects

5. To what extent does school management influence completion of construction projects in day secondary schools?

Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

6. To what extent does the following influence completion of construction projects in day secondary schools?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Coordination and planning					
Allocation of resources					
Conflict resolution					
Leadership skills					

7. In your own opinion, how does school management influence completion of construction projects in day secondary schools?

.....

PART C: Budget allocation and completion of construction projects

8. To what extent does budget allocation influence completion of construction projects in day secondary schools?

Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

9. To what extent does the following influence completion of construction projects in day secondary schools?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Availability of finances					
Adequacy of finances					
Source of Finance					
Disbursement channels					

10. In your own opinion, how do the facets of budget allocation above influence completion of construction projects in day secondary schools?

.....

PART D: Project planning and completion of construction projects

11. To what extent project planning influences completion of construction projects in day secondary schools?

Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

12. To what extent do the following attributes of project planning influence completion of construction projects in public day secondary schools?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Project scope plan					
Project cost estimates					
Quality management plan					
Human resource plan					

13. In your own opinion, how does the above attributes influence completion of construction projects in public day secondary schools?

.....

PART D: Monitoring and evaluation and completion of construction projects

14. To what extent does monitoring and evaluation influence completion of construction projects in public day secondary schools?

Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

15. To what extent does the following influence completion of construction projects in public day secondary schools?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent

Project progress report					
Project duration					
Team interactions					
Meetings and minutes					

16. In your own opinion, how do the attributes of monitoring and evaluation above influence completion of construction projects in public day secondary schools?

.....

Thank You for Your Participation

APPENDIX III
QUESTIONNAIRE FOR CDE, DEO AND DQASO

Good morning/afternoon Sir/ Madam;

This questionnaire is intended to get information from schools in your jurisdiction for academic purposes. The research is investigating institutional factors influencing Completion of Construction Projects in day Secondary Schools in Imenti North Sub-County, Meru County. Please answer the questions objectively and truthfully as possible. Do not write your name anywhere in the questionnaire. Provide information as accurately as possible for it to be useful in this study. Use a tick (✓) to indicate your response where appropriate.

PART A: BACKGROUND INFORMATION

1. What is your gender?

Male [] Female []

2. How old are you?

26-30 []

31-35 []

36-40 []

Above 40 []

3. Which is your highest level of education?

Post Graduate []

Undergraduate []

Diploma []

Certificate []

Any other (specify).....

4. How long have you served in your current position?

1 to 5 years []

6 to 10years []

11 to 15 years []

16 to 20 years []

21 years and above []

PART B: School Management and completion of construction projects

5. To what extent does school management influence completion of construction projects in day secondary schools?

- Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

6. The following are some statement about your feeling on reason projects completion rates are low due to school management in secondary schools; indicate your level of agreeableness by ticking (√) most appropriate choice

KEY: Strongly agree- 1; Agree- 2; Uncertain- 3; Disagree- 4; Strongly Disagree- 5

	Questions	1	2	3	4	5
a	Project management skills influence completion of construction projects in schools					
b	Training and work experience influence completion of construction projects in schools					
c	Skills in proposal writing influence completion of construction projects in schools					
d	School management leadership influence completion of construction projects in schools					

7. In your own opinion, how do the facets of school management above influence completion of construction projects in day secondary schools?

.....

8. How does school management contribute to successful completion of construction projects in schools?

.....

PART C: Budget allocation and completion of construction projects

9. The following are some statement about your feeling on reason projects completion rates are low due to budget allocations in secondary schools; indicate your level of agreeableness by ticking (√) most appropriate choice

KEY: Strongly agree- 1; Agree- 2; Uncertain- 3; Disagree- 4; Strongly Disagree- 5

	Questions	1	2	3	4	5
a	Funds available to fully finance day secondary school projects in Imenti north sub county is inadequate					
b	The disbursement of finances by government is not very frequent					
c	The sources of project finances are always inadequate					
d	Accounting and finance errors, such as vendors being paid twice, budgeting, management, accounting and auditing problems cause projects to fail					

10. In your own opinion, how do the facets of budget allocation above influence completion of construction projects in day secondary schools?

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PART D: Project planning and completion of construction projects

11. To what extent does project planning influence completion of construction projects in day secondary schools?

- Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

12. The following are some statement about your feeling on reason projects completion rates are low due to project planning in secondary schools; indicate your level of agreeableness by ticking (√) most appropriate choice

KEY: Strongly agree- 1; Agree- 2; Uncertain- 3; Disagree- 4; Strongly Disagree- 5

	Questions	1	2	3	4	5

a	Project planning is a critical success factor in completion of construction projects in schools					
b	Involvement of all stakeholders in projects planning influence completion of construction projects in schools					
c	Conformance to project plans influence completion of construction projects in schools					
d	Inadequate plans are a major contributor to un complete projects in schools.					

13. How does project planning contribute to successful completion of construction projects in schools?

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PART E: Monitoring and Evaluation and completion of construction projects

14. To what extent does monitoring and evaluation influence completion of construction projects in day secondary schools?

- Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

15. The following are some statement about your feeling on reason projects completion rates are low due to monitoring and evaluation in secondary schools; indicate your level of agreeableness by ticking (√) most appropriate choice

KEY: Strongly agree- 1; Agree- 2; Uncertain- 3; Disagree- 4; Strongly Disagree- 5

	Questions	1	2	3	4	5
a	The ministry conducts regular monitoring and evaluation of school projects					
b	Schools conform to monitoring and evaluations of projects as directed					

c	Funds for monitoring and evaluation are always availed in time					
d	School heads understand their roles in monitoring and evaluation of school projects					

16. In your own opinion, how do the facets of monitoring and evaluation above influence completion of construction projects in day secondary schools?

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Thank You for Your Participation

APPENDIX IV: WORK PLAN

	June 2018				July 2018				August 2018			
	NUMBER OF WEEKS											
WORK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12
Proposal development	■	■										
Proposal defense at the Department			■									
Seminar defense at the Faculty level				■								
Proposal corrections and consultation					■							
Data collection						■	■					
Data editing, entry and analysis								■				
Project write up and consultation with supervisors									■	■		
Project presentation											■	
Correction and submission of final thesis												■