FACTORS AFFECTING COMPLETION OF CONSTRUCTION PROJECTS IN SECONDARY SCHOOLS: A CASE OF IMENTI NORTH SUB-COUNTY, MERU COUNTY, KENYA

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DECLARATION

This Research Project report is my original work and has not been presented for a degree in any other University.

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DEDICATION

This research project report is dedicated to my family for moral and financial support that they have given me, especially I want to dedicate it to my daughters Doreen, Caroline and Betty; My parents, Mwereria, Rosalia and Fredrick. Let it inspire them to work hard in their daily endeavours.

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LIST OF ABBREVIATIONS

AGM	-	Annual General Meeting
BOM	-	Board of Management: BOG before 2012
CDF	-	Constituency Development Fund
CFSK	-	Computer for Schools Kenya
DEO	-	District Education Officer
CDE	-	County Director of Education
DQASO	-	District Quality Assurance and Standards Officer
ESSP	-	Education Sector Support Programme
IPMA	-	International Project Management Association
KCPE	-	Kenya Certificate of Primary Education
KCSE	-	Kenya Certificate of Secondary Education
KESI	-	Kenya Education Staff Institute
KESSP	-	Kenya Education School Support Programme
KIA	-	Kenya Institute of Administration
KNEC	-	Kenya National Examination Council
MDG	-	Millennium Development Goal
MoE	-	Ministry of Education
MOE	-	Ministry of Education: MOEST before 2008
MOEST	-	Ministry of Education, Science and Technology: MOE after 2008
PMBOK	-	Project Management Body of Knowledge
PMI	-	Project Management Institute
PTA	-	Parents Teachers Association
UNCTAD	-	United Nations Commission for Trade & Development
SCEDOs	-	Sub-County Education Officers
TSC	-	Teachers Service Commission

ABSTRACT

Project management in the current 21st century is faced with the multifaceted operations. The school heads play a dynamic role in the management of school projects. Today you will find uncompleted school buildings, schools without necessary instructional materials and infrastructure, school laboratories with little or no equipment, and so on. Secondary schools have been receiving funding meant to establish or improve existing facilities such as classes, dormitories, laboratories, libraries, especially since the previous Government took over in 2007 which invested about 26 billion on economic stimulus program where schools infrastructure was the main beneficiary. However some projects stalled along the way or even before commencement, mostly called white elephant projects, as a result some facilities remain unutilized especially due to none completion. This is especially with the CDF projects in schools which are usually completed partially or poorly. With this trend Kenya's vision 2030 will not be realized. It is in this perspective that this study investigated the factors that contribute to completion of secondary school projects in Imenti north Sub County. The specific objectives of the study were; to determine the extent to which availability of funds affects completion of projects in secondary schools, to establish how project communication affects project completion, to establish the relationship between management skills and completion, to determine the extent to which stakeholder involvement affects completion of projects in secondary schools. The study adopted descriptive survey design. The target population for this study consisted of 131 respondents from 43 schools including school principals, accountants/bursars and BOMs chairpersons in Imenti north Sub County; In addition, The District Education Officer (DEO), and District Quality Assurance and Standards Officer (DQASO), in the sub county were sampled. The sample size was 98 participants selected through proportionate sampling; DQASO and DEO were purposively selected. This constituted 74.8% of the target population. Data was collected using questionnaires and interview schedule and was analysed using descriptive statistics and regression analysis. From the study, it was found that the factors investigated had influence on construction project completion in secondary schools in Imenti north Sub County. These were; availability of funds, project communication processes, project management skills and stakeholders involvement. In fact all the factors reviewed in this study have an effect on project completion. The findings showed that there was a significant relationship between the four independent variables and completion of construction projects. Amongst all the independent variables, availability of funds statistically was seen to have the most significant relationship with successful completion of projects (p-value = 0.000) with *t* value of (6.235). The findings on financial availability further supported early studies which state that financial difficulties are the major cause of suspension of works in construction projects leading to delay in the timely completion of projects. This study particularly showed that the secondary schools in Imenti north Sub County lacks adequate funding, adequate project management skills for school principals and adequate involvement of stakeholders required to successfully complete projects of secondary schools in Imenti north sub county.

CHAPTER ONE
INTRODUCTION

1.1 Background to the study

A Project is an exclusive undertaking with a beginning and a termination, undertaken by individuals to meet established objectives with defined limitations of time, resources, and quality (Baker and Baker 1992). Globally, a number of studies have been accomplished that look into the completion rates of projects in constructions sectors. These studies show that serious problems exist in a broad cross-section of sectors, as pointed out by Calleam Consulting Ltd (2014).

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).

In Africa, project failures generate a cycle of rising expectations and unfulfilled promises. A lot of time, effort and resources are invested to put more innovation into practice. This shows the need to relook at projects performance with a view of identifying the right success measures for appropriate application. Amponsah (2012), and Matta and Ashkenas (2003) noted that the problem to project failure lies with the traditional approach that shifts the project teams' focus away from the end result toward developing recommendations, new technologies, and partial solutions. In Malawi, a significant number of the educational projects administered under the ESSP have been plagued by delays, and other project management and delivery problems. The mitigation measures put in place to prevent poor project performance do not seem to have the desired effect (Chirwa, Samwinga and Chakantu 2011). Igunnu et al. (2005) noted that faulty project management and execution are everywhere round the

world; uncompleted government buildings due to lack of funds, new schools without desks or teacher, hospitals and health centers without drugs, abound (Mulkeen, 2010).

In Kenya, serious challenges have bedeviled the implementation of the FPE policy, (UNICEF & World Bank, 2009) especially with regards to infrastructural development. They include congested classrooms, limited physical facilities and shortage of qualified teachers, (KENPRO 2010). The Kenya government infrastructural policy is geared to achieve Universal Primary Education (UPE) has to have infrastructural developments in the wider international context. GOK (2012) Education Sector Report, 2013/14-2015/16 MTEF period, noted that the sector priority areas of expenditure will include Construction and improvement of infrastructure in learning institutions at all levels. This is an indication of how important infrastructural projects are important in the education sector.

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

Kenya Vision 2030 is the nation's new 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 Task force on re-alignment of education in Kenya (2012), whilst enrolment rates at primary and secondary levels have increased, learning achievements are declining because of lack of facilities and quality assurance

measures are not comprehensive enough and therefore teachers and school management in general are not held into account for the declining educational achievements in the country.

Nyaguthii and Oyugi (2013) reveal that implementation of CDF projects previously show a mismatch between the local nature of school capital expenditure decisions and financing for the operations and maintenance of such projects with local benefits. Also given the discretionary nature of capital spending and the intrinsic value attached to political symbolism in launching CDF projects, especially in secondary schools, more often, new projects are undertaken, while the existing ones are either left to deteriorate or are inadequately funded (Tanzi & Davoodi, 1998).

Mugo (2013) noted that many Secondary schools in Kenya have been receiving funding meant to establish or improve existing facilities such as classes, dormitories, laboratories, libraries, especially since the current Government took over in 2003. It was also established that most donors do not assess and evaluate projects that they had funded and do not give any recommendations and this affected the implementation of projects, (Mugo, 2013).

In Imenti North sub-county a number of school projects and other project funded by CDF did not materialize. Kimathi (Daily Nation October 22nd, 2013) noted that some projects are ghost projects, this include DEB Municipality Secondary schools among others, where nothing has been done. In other cases, Mukiri (2014), in Imenti South sub-county noted that BOM faced many challenges while managing CDF school projects. 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). This study concentrates in Imenti North Sub County which as indicated earlier has numerous uncompleted projects in secondary schools. The County borders Meru Central, Buuri, Tigania West, Isiolo and Tharaka within the latitude 0^{o}3' 45' North and 0^{o} 2'30' South and latitudes 37^{o} and 38^{o} East, (GOK, 2012). It comprises two divisions: Miriga Mieru West (MMW) and Miriga Mieru East (MME) covering an area of 223,659km^{2} (C.B.S, 2009). The district has a population of 149,144 people. The sub county has 43

secondary schools of which 26 are day secondary schools established through constituency development fund (Kaguri, Ibuathu, Njati, and Thiaine, 2014).

1.2 Statement of the Problem

The concept of delays in projects completion is a global phenomenon. A study by United Nations Commission for Trade and Development (UNCTAD), in 2001, on African construction problems and their implications for New Partnership for Africa's Development (NEPAD) identified costly project delays as a major problem and identifies poor project time, management skills, quality and cost performance and other issues. This calls for a need to address unpredictability of projects completion in terms of cost, delivery time, management skills, involvement of stakeholders, and quality expected.

In Kenya there are secondary school projects that have failed, many stalled or completely failed, especially those initiated by CDF. According to KESSP (2005-2010), there are numerous examples of faulty projects in many public secondary schools in Kenya. Daily Nation (June 26 2011) stated that in Wundanyi constituency, Taita Taveta County, only few projects have been completed. From 2003 - 2011 the kitty received a total of 233 million but less than 10 projects have been successfully completed. In Meru County various CDF projects have not been completed or have stalled for years. In Imenti north sub-county, in 2011, about 46.8% of the projects were completed, in F/Y 2012-2013 only about 25% were completed, (CDF data North Imenti 2014). Secondary schools have been receiving CDF funding meant to establish or improve existing facilities such as classes, dormitories, laboratories and libraries. However some projects failed to start or have stalled from previous regime along the way or even before commencement. As a result some facilities remain unutilized due to non-completion and if this continues then Kenya's vision 2030 will not be realized. It is in this perspective that this study tries to investigate the factors affecting completion of construction projects completion in secondary schools in Imenti north sub-county.

1.3 The Purpose of the Study

The purpose of the study was to establish the factors affecting completion of construction projects in secondary schools in Imenti North Sub County in Kenya with a view of establishing which factors influence projects completion, and which ones make secondary school projects' completion successful in order to reduce the immeasurable cost to society with debilitating effects on the contracting parties.

1.4 Research Objectives

This study was guided by the following objectives;

i) To determine the relationship between availability of funds and completion of construction project in secondary schools in Imenti north sub county;

ii) To Establish how project communication influences completion of construction project in secondary schools in Imenti north sub county;

iii) To establish the relationship between project management skills and completion of construction project in secondary schools in Imenti north sub county;

iv) To determine the extent to which stakeholders' involvement influence completion of construction project in secondary schools in Imenti north Sub County.

1.5 Research Questions

This study was guided by the following questions;

i) What is the relationship between availability of funds and completion of construction project in secondary schools in Imenti north Sub County?

ii) How does project communication affect completion of construction project in secondary schools in Imenti north Sub County?

iii) What is the relationship between Project management skills and completion of construction project in secondary schools in Imenti north Sub County?

iv) To what extent does stakeholder involvement influence completion of construction project in secondary schools in Imenti north Sub County?

1.6 Significance of the Study

The study could be significant to secondary school administrators, Ministry of Education and Training Institutions in the following ways: It investigated the significant factors that contribute to successful completion of construction projects in schools in Kenya. This would enable the Ministry of Education, CDF, and other financiers to appreciate the challenges of starting, implementing and completing a project and look for ways and means of addressing project failures and success. The study would also add to the body of knowledge on school project management and provoke others to research in this area, and propose further studies related to project management in a school situation. 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 will also benefit other construction industry sub-sector stakeholders like contractors, consultants; studies input suppliers, traders and policy makers, who will be able to make more informed decisions.

1.7 Limitations of the study

The major constraints in this study included the conservative nature of school principals and their apathy towards providing information; especially with respect to financial matters. Human errors and biasness were other limiting factor of this study. This was because some data were obtained through discussions and interviews therefore there was the possibility of human error in omitting some vital information. The study is 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 secondary schools in Kenya.

1.8 Delimitation of the study

The study covered only Imenti North Sub County. This was mainly due to limitation of resources in terms of time and finance required in undertaking the study on a larger scale. The study targeted school principals, BOMs and school accountants of the sampled schools, as well as DEO and DQASO. The selected key issues in this study were; availability of funds, project communication, project management skills, and stakeholders involvement. Data was mainly from past project information, either as

recorded or as remembered by respondents. Hence, findings faced the limitation of memory lapses.

1.9 Assumptions of the study

The study understood that there were policies in secondary schools on construction projects completion and also every school adopted a risk management strategy while initiating and implementing projects and that they were implemented in both private and public schools throughout the country.

1.10 Definition of Significant Terms used in the study

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.

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.

Project Management skills: These are skills of secondary school principals 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.

Design-Build (D-B): is a system of contracting whereby one entity performs both architectural/engineering and construction under one single contract. (Design-builder takes the risk). Design-Bid-Build (D-B-B) is where the contracting agency either performs the design work in-house or negotiates with a consultant firm to prepare drawings and specifications, (contracting agency takes the risk).

Project completion: is achieving project objectives and goals. The project gets all necessary approvals both in terms cost, time and quality and its usability with the target client is achieved.

School capture: this is where a school is held at ransom by a supplier due to none payment of previous debts and its forced to continue getting the same supplier even at inflated prices.

1.11 Organization of the study

This study is organized into five chapters. Chapter One comprises study background statement of the problem, objectives, purpose, significance, limitation assumptions and organization of the study. Chapter Two reviews literature on dependent variable and literature on each independent variables, theoretical literature, conceptual framework, knowledge gaps and summary of the chapter. Chapter Three discusses research design, target population, sampling method and sample size, data collection instruments, data analysis, validity and reliability and ethical considerations, it also operationalized the research variables. Chapter Four discusses data analyses, interpretation and presentation, Chapter Five summarizes the study findings, discussion, conclusion and recommendations, it has also recommended on further studies that can be undertaken.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter has reviewed various studies on availability of funds, project management skills, project communication, and stakeholders' involvement and how they influence projects completion. The chapter also analyses theoretical framework adopted and conceptual framework that brings out how various variables are related. It also arouses new ideas to the study and in identifies the possibilities which could have been overlooked in the past.

2.2 Construction projects' completion in Institutions

In order to manage projects effectively and increase the chances for a project's success, it is important to follow certain project management method for completing the project. 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.

Lavine (1994) stated that the warring factions in Africa have a better chance of communicating with each other than many of the user and technology groups that 'work together' in today's project development environment. He pointed out that he was hired as a developer for a large bond-processing bank where he was told on his third day that the development team was no longer allowed to speak to anyone from the business community. It seemed that relations between the two groups had become so bad that communication had come to a complete halt. In fact, negotiations had begun in an attempt to find an acceptable liaison to work between the two groups. This may seem like an extreme example, but this happens in projects.

Six stages of project cycle have been typically identified as: Identification, Preparation, Appraisal, Proposal preparation, approval and financing, Implementation and Monitoring and Evaluation, (Bishop 2001) noted that a project can result in failure or success at any of these stages. It is also evident that physical projects in Kenya are managed by very qualified professionals who end up failing; an example is the extension by two floors of the school of built environment building at the University of Nairobi which was supervised by Professors teaching at the same school (Gwaya, Masu, and Wanyona, 2014).

The criteria in which project completion has often been measured and have been called key performance indicators and even dimensions to project performance, (Atkinson, 1999, Betham et al., 2004). Several other authors, within the multi-dimensional construct of project performance have suggested diverse measures or indicators based on experimental research. While some concentrated on using these measures as strategic weapons, others underscored the proper demarcation of the measures and groupings into classes that would make tracking and management of projects reasonable (Gwaya, Masu, and Wanyona, 2014).

A major problem found with the present patterns of project performance measurement is the lack of consensus on what constitutes success or failure of the project. Various authors have expressed concern about the definition of success and failure. Citing from Morris and Hough (1996), Murray *et al,* (2002) specify that the definition of a success or failure of a project is not always an easy one. Project management models have not always agreed on a universal definition of what is meant by a project success (Shenhar *et al*, 2002). Accordingly, the factors causing 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.

Murray *et al* (2002) notably reiterated what Morris and Hough's (1987) suggested as to whether one should study project successes and failure. To some extent, they conclude, it would seem that Murphy's Law is at work: 'what can go wrong will go wrong'. In their contribution, Klakegg *et al* (2005) admit this lack of consensus on what success is and how to measure it as an important but often unresolved issue in development projects. They berated that success is to apply the right amount of resources to do the right things at the right time. Pointedly, they admitted that what the right thing may be, for government projects, is for the decision makers to agree, and should reflect relevant needs in society as expressed for instance in public international agreements.

One of the results of this disagreement is the inherent assumption that the two are dichotomous; that a project either it's completed successfully or it's failed. One of the causes of the difficulty in reaching consensus on the definition of project success or failure lies in the fact that these two have been treated as a dichotomous. This study takes the view that the two are not mutually exclusive and that they could, in fact, exist together across the stages of the project life cycle. It uses the contingency theory. Whereby uncertainty about what to build and how, is reduced as projects move from conception to completion through abstract planning, design, and construction. Owners, designers, contractors and suppliers include additional time and money in their estimates to absorb uncertainty, in order to reduce failure and increase success. Likewise, project owners may include addition space or capacities in their package to cope with changes, and architects and engineers may make provisions for the unexpected and unknown in their designs. These contingencies, established to absorb uncertainty, may be reduced as the project matures, as what and how become clearer and more stable (Howell, 2012).

De Wit (1988) suggests that factors affecting project success or failure are usually good indicators of preconditions of success or failure. Therefore in the project situation, the factors that lead to success could, sometimes, be separate and distinct from the factors that lead to stalling or failure that is the absence of those success factors should not always be seen as the only causes of failure. Hence there could be a condition for a project in which assessment will result in 'no success' without necessarily implying 'failure'.

In practice, this is realized by using multi-measures to assess projects. In such a situation a project could fail in some criteria but perform very well in others. In assessing a construction project thus, a fundamental theory to embrace is that the absence of success does not necessarily indicate a failure and vice versa. This position is explained by considering the various interest groups (stakeholders) within a typical construction project with diverse focus, expectations and what is of essence to them across the project lifecycle, (De Wit, 1988).

In Kenya, education sector takes up about 21% of the government annual expenditure accounting for the second largest share of the annual budget. (The Daily Nation Newspaper, June 15th 2012). The task force (MOE, 2012) about financing of education and training at all levels in Kenya is a combined effort of the National and County governments as provided through various government legislation, the private sector, NGOs, households, communities, religious organizations and development partners. The flow of funds to schools and other learning institutions depended on the source of funding; and established unit costs. Capitation grants are channeled directly to schools and are based on individual enrolments and special needs. Schools then receives guidance on how to prepare their estimates, which is sent to County Education Office for harmonization and prioritizing, The County Office then forward the estimates for the County education resource needs to National Government as basis of the Ministry estimates, drawn on the basis of learning needs (MOE, 2012).

Managing of all-inclusive project requires the school heads to have effective project management skills. They must have the ability to make decisions, or at least have regular access to decision makers in order to make decisions about what project to give priority, how to source and allocate funds and planning of events, (KESSP, 2010). However, as Nandwah (2011) observed, educational administrators were initially trained for teaching and not necessarily for managing projects, and this could be attributed to continued project failure in schools, in this study paper on the preparation and development of public secondary schools noted that school projects were managed by school principals.

In Kenya, Musera, Achoka and Mugasia (2012) stated that secondary school heads are selected and appointed by the Ministry of Education (MoE) through the Teachers Service Commission (TSC) and are responsible for 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 school's Board of management (BoMs) and the school's Parent - Teacher Association (PTA) are on the management of the school 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 of education offered in the school. In particular, 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).

The current position of project management in Kenya towards effective and efficient execution of projects is argued from various perspectives; Some of the emerging views include Gwaya, et al, (2014) were as follows:- (i) the roles of project managers should be clearly defined and certification of project managers required to ensure quality of project management and execution efficiency in Kenya; (ii) unstructured and minimal application of project management skills to construction projects has resulted in ineffective and inefficient execution of construction projects. (iii) That there is need for early inclusion of project managers in execution of construction projects; (iv) That there should be building information modeling systems as an approach to modern construction and design, and should be introduced to project managers early so as to achieve quality, cost and timely projects execution; (v) That the role of project management in construction projects is gradually getting indispensible as projects get more complex and bigger; (vi) That project management provides a useful way to enable clients to better interact with financial institutions, authorities, consultants and contractors especially on large projects and for clients who may be green to construction.; (vii) That there is need for regulation in the

practice of project management. Currently everybody is calling himself/herself a project manager without requisite qualifications and evaluation criteria; (viii) there are need for all stakeholders to be involved and adopt it, must appreciate it and practice it. The project design team, contractors and project managers particularly must do so; so that a lot of gaps in project design and execution are filled.

Gwaya, et al, (2014) also observed that Project management is not properly regulated consequently; it's usually practiced by unprofessional persons aiming for swift returns. The currently construction project management as practiced in the industry appears to be informal and unstructured being performed by professionals with no or little formal training in the discipline. As a result projects and clients rarely receive the optimal benefits touted by the practitioners. The project managers are just taking the role of coordinating and delivering project from the Architects and Engineers. The consultants are generally reluctant to take on a project manager because they relinquish control.

While clients see them as another fee expense yet a good project manager can really help a project to actualize the set objectives. They further clarified that the role of project management should be transferred from present to future, meaning a qualified person with project management skills should be at the top of the projects; managing specifically the scope and time since cost is already taken care of. However with proper structuring, project management can give good results for both the client and the consultant, this will also require proper definition of roles to avoid overlapping roles of individual consultants. Thus, Project management variables for Kenya should comprise of the six variables of cost, quality, time, scope, human resources and project performance, (Gwaya, *et al*, 2014). These variables can then be monitored as leading measures instead of lagging measures monitored at regular intervals to ensure efficiency in the construction industry in Kenya.

2.3 Availability of Funds and Project completion

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. It is not clear whether this arrangement is friendly to the schools, and the study sought to find out the challenges being experienced in that area.

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.

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).

2.4 Project Communication and Project completion

A successful project manager must be a great communicator! Project Management Communication is a skill that is never perfected, can always be improved and is pivotal in being able to initiate and mobilize a project effectively. Much has been written on the theory of communication; Project communication includes general communication between team members but is more encompassing. It utilizes the Work Breakdown Structure (WBS) for a framework, it is customer focused, it's limited in time, it is product focused with the end in mind, and it involves all levels of the organization, (PCH, 2007), the concerned is the key types of communication a project manager must employ in defining and implementing projects. Elenbaas in Frese (2003) observed that projects are about communication. This study emphasized the fact that lack of communication is very costly to an organization. Sure, a company may still succeed, but without good internal and external communication the cost of success will be much higher than necessary. Another consequence is that success often takes much longer than necessary to achieve. Sometimes success never arrives.

Lack of good communication can easily turns a corporate strategy, or a school project, into a modern day Towel of Babel. Lavine (1994) tells us that 'The warring factions in Africa have a better chance of communicating with each other than many of the user and technology groups that 'work together' in today's project development environment.' Lavine also relates that some years ago he was hired as a developer for a large bond-processing bank. He was told on his third day that the development team was no longer allowed to speak to anyone from the business community. It seems that relations between the two groups had become so bad that communication had come to a complete halt. In fact, negotiations had begun in an attempt to find an acceptable liaison to work between the two groups. This may seem like an extreme example, but this happens in projects. Sometimes if overt, but all too often it is on a subtle level. Subtle dysfunction is probably harder to correct because it is more difficult to pinpoint. You know something is wrong, but it's difficult to tell exactly what it is or to pinpoint the root cause of the problem. This often makes the problem intractable.

Kirksey (1990) pointed out that one predictor of project success is when communications are kept honest and open between customer and vendor. His major indicator of project failure in this area is when an IS project manager fails to correctly read warning signs that communication is breaking down. The result is a missed opportunity to correct the situation before it becomes too late. Wixom (2001) argues that User Participation and Team Skills are two of seven imperative implementation factors that determine project success or failure, and that these two are essentially communication skills. User Participation occurs when users are assigned project roles and tasks, which lead to a better communication of their needs and help, ensure that the system is implemented successfully.

Wixom (2001) explains that team Skills are important when implementing a system and can directly affect its success or failure. Team skills include both technical and interpersonal abilities. These interpersonal abilities include, without exception, interpersonal communication skills. Who do you know that communicates effectively? Watch them and determine why their communication is effective. Also watch those who do poorly at communicating, and make every effort to avoid their bad habits. There is one last point that involves communication and how it must be used to put user expectations into perspective. Hayes (1997) provides additional insight by noting, 'Executives expect sales efforts and product development efforts to fail, but not IT projects. He also tells us that we must convince managers that system development today is a gamble, but one may have a big payoff. Hayes tells us that we must 'market' our efforts and manage user expectations. If the user understands that there is risk, then 'you'll have a better chance of delivering what the users expect. For all communication, the medium must be as strong as the message. Some people live and die by emails filled with spreadsheet attachments. Others want a simple text. And all of those preferences should be considered as project communications are developed, (PMI, 2013).

2.5 Project Management skills and Project completion

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 is in these three areas: knowledge, skills and

attitude. To start with, knowledge is one aspect of competence. Ireland (2004) noted that 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 second 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 sub units, and visualize how the organization fits into its broader environment (Robbins & Coulter, 2012).

The third aspect of competence is the personal and professional demeanour exhibited by a person attitude 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 the entire project stakeholders, for example project team, senior management, customer, and special interest groups.

2.6 Stakeholders Involvement and Project completion

The rapid expansion of student enrolments in recent years, coupled with inadequate resources to cope with the ever-increasing demand for educational provision, has made school project management a much more complex and difficult enterprise now than a few decades ago. To ensure effective and successful management, the school head must not only be innovative, resourceful and dynamic, but also be able to interact well with stakeholders within and outside the school. These include staff and students, parents, members of the Parent Teacher Association, government, contractors, community leaders, and many other members of the community. All of these need to be brought in some way or other, into the decision-making and project management process if they are to remain supportive of what the school head is doing in terms of project undertaking. In other words, for the purpose of achieving success as a project manager, the school head must create an environment of participation in the running of the school, (Ndagi, 2013).

Kansas University (2013) defined Stakeholders as those who may be affected by or have an effect on an effort. They may also include people who have a strong interest in the effort for project, academic, philosophical, or political reasons, even though they and their families, friends, and associates are not directly affected by it. There are three main types of stakeholders: Primary stakeholders - the people or groups that stand to be directly affected, either positively or negatively, by an effort or the actions of an agency, institution, or organization. Secondary stakeholders - are people or groups that are indirectly affected, either positively or negatively, by an effort or the actions of an agency, institution, or organization. And, Key stakeholders, - who might belong to either or neither of the first two groups, are those who can have a positive or negative effect on an effort, or who are important within an organization, agency, or institution engaged in an effort. The director of an organization might be an obvious key stakeholder, but so might the line staff – those who work directly with participants – who carry out the work of the effort. If they don't believe in what they are doing or don't do it well, it might as well not have begun. Other examples of key stakeholders might be funders, elected or appointed government officials, heads of businesses, or clergy and other community figures who wield a significant amount of influence.

In this study the key stakeholders involved included the government, donors, contractors, DQASOs and DEOs. Primary stakeholders involve contractors, students and staff, community leaders and PTA representatives and secondary stakeholders include all other persons who have some interest in the school project like surrounding community, other institutions.

Stakeholders are generally said to have an interest in a project or organization undertaking based on whether they can affect or be affected by it. The more they stand to benefit or lose by it, the stronger their interest is likely to be. The more heavily involved they are in the project or undertaking, the stronger their interest as well.

2.7 Theoretical Framework

This study used 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, & 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.

Henderson and Clark (1990) proposed a four factor framework for defining innovation and how this impacts on an organization, independent of industry type; Bubshait and Selen (1992) examined the relationship between project characteristics and management techniques and presented a categorization where projects are grouped based on industry sector and application area; Turner and Cochrane (1993) proposed a categorization matrix that the authors theorized provided a benefit to practitioners in selecting start-up and management techniques; Lindvist et al. (1998) used a case study methodology to demonstrate how a project typology model can detect error in a systematic complexity context; Payne and Turner (1991) showed that people more often report better results for their projects when they tailor the procedures to the type of project they are working on; Floricel and Miller (2001) were some of the first to present a categorization of projects based on their strategic perspective; Shenhar and Dvir (2001) developed a typological theory of project management and a four dimensional framework for project analysis; Lewis et al. (2002) proposed a framework that showed that project management styles fluctuate over time and blending of styles enhances performance; Youker (2002) suggested that the most important and useful breakdown of project type is by the product or deliverable of the project; Archibald and Voropaev (2003) claimed that project categories and sub-categories serve an essential part in project portfolio management processes; Pich, Loch, and De Meyer (2000) demonstrated a strategy model based on complexities and uncertainties of information; and Crawford et al. (2004), studied project categorizations and their purposes and attributes, as used by companies around the world and proposed a framework for determining a project management categorization system.

Gatignon et al. (2002) noted that there was still substantial empirical confusion on the effects of different kinds of innovation on organizational outcomes. Furthermore, while most organizations use a project classification or categorization system, Crawford et al. (2004), not many of these systems are based on rigorous empirical research. As mentioned, the objective of this paper is to apply a diversity of project management contingency frameworks for the study of a project failure to reveal how applying different exigency approaches may provide deeper insights in the analysis of project success and failure, and lead to additional questions for future research and challenges in project management, (Sauser, Reilly, and Shenhar, 2009).

Therefore, in the project situation, the factors that lead to completion could, sometimes, be separate and distinct from the factors that lead to failure. There could be a condition for a project in which assessment will result in 'non completion' without necessarily implying 'failure'. In practice, this is realized by using multi-measures to assess projects. In such a situation a project could fail in some criteria but perform very well in others. In assessing a construction project thus, a fundamental theory to embrace is that the absence of success does not necessarily indicate a failure and vice versa. This position is explained by considering the various interest groups (stakeholders) within a typical construction project with diverse focus, expectations and what is of essence to them across the project lifecycle.

Kinyua (2013) pointed out that 35% of principals reported that there were stalled projects in their schools. The projects had stalled due to lack of adequate funds, poor planning, lack of clear vision/mission, and shifting attention to other needs. They supported six variables comprising of cost, quality, time, scope, human resources and project performance as the most appropriate project management factors for Kenya at a confidence level of 95%. This study sought a different dimension of looking why projects fail to be completed or rather why they stall on the way, and involved four variables including inadequacy of finances, poor communication, skills and competence levels of school principals, and stakeholders' involvement.

2.8 Conceptual Framework

The study proposes that the school managers need to mobilise adequate resources, involve all stakeholders to achieve desired school projects outcomes of satisfaction and have relevant skills in project management. The study aimed at investigating the factors that leads to project completion in secondary schools in Kenya and in particular secondary school construction projects in Imenti north Sub County. The following conceptualization of the idea has been put forth.

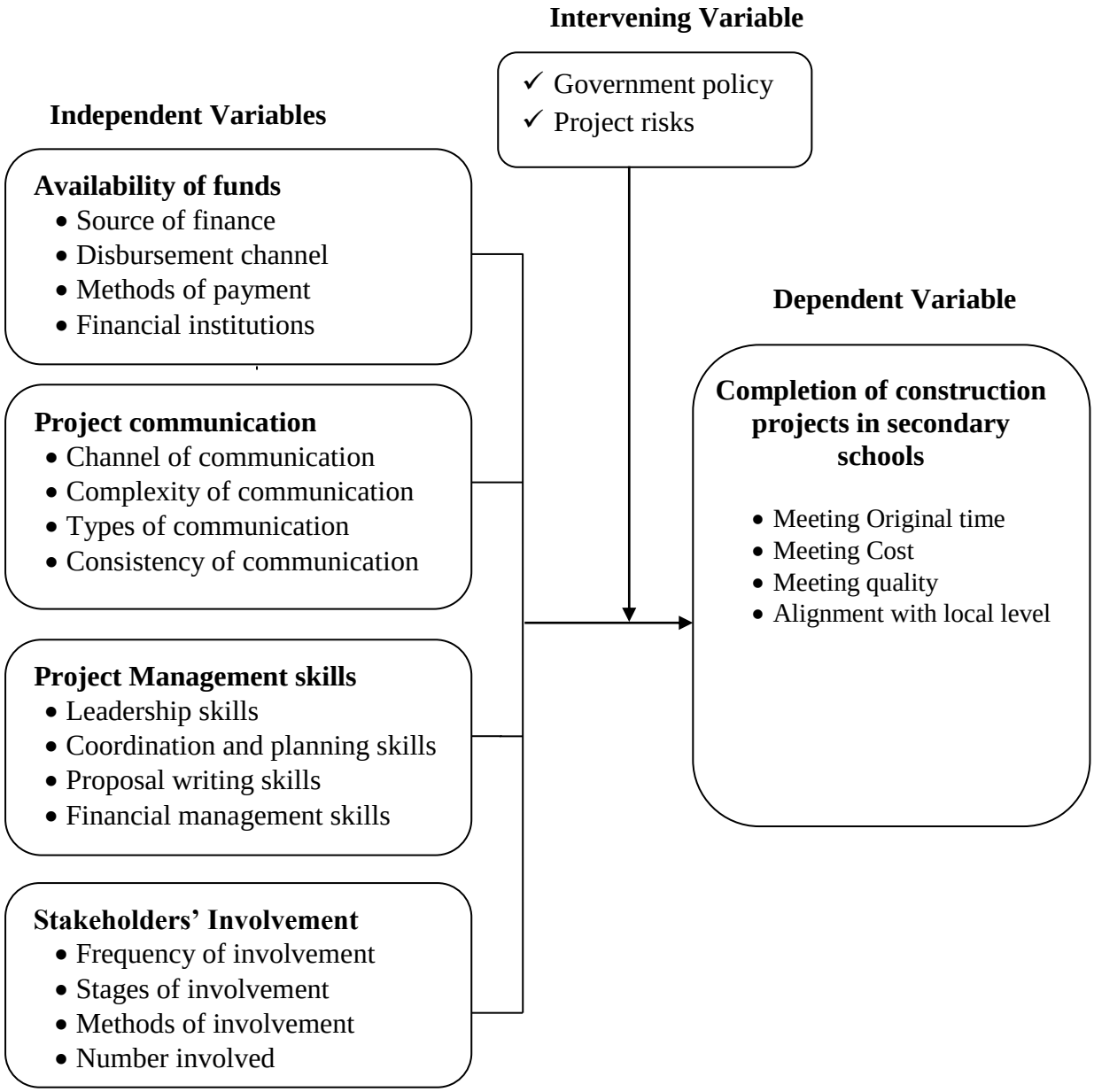

Figure 1 Conceptual Framework

2.9 Explanation of the conceptual framework

Figure 1 indicates the relationship between the dependent and independent variables of the study. As shown in the figure, the completion of construction of secondary schools projects, which is the dependent variable, could be affected by availability of financial resources; if financial resources are not adequate, then projects implementation is affected and this may make the project stall for years or affect other projects. This has been the case with many CDF projects in Kenya. Involvement of all stakeholders is also crucial for project completion, this is where a principals 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.

Qualification of principals in school management is another 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. Intervening variables that are thought to influence the relationship between Dependent variables and Independent variables is the Government policy – which may come up with strategies/legislation that affect project implementation and completion. All the above factors have either direct or indirect influence on the successful completion and timely delivery of construction projects in schools.

2.10 Knowledge Gaps to be filled

Various studies have indicated that successful completion of projects is multifaceted and that no single factor can lead to successful completion in projects. For instant Greer (1999), pointed out that project is successful if it satisfies all three legs of the triple constraint, namely, performance (specification), cost and time. Thomsett (2002) in an extensive examination of 20 failing projects over a period of 18 years expanded this criteria of success as: ‘satisfies stakeholder groups, meets functional requirements, meets quality expectations and requirements, within cost, deadline, delivers sustained and actual benefits and provides the team with professional satisfaction and learning.

Pinto and Slevin (1987) argued that in spite of extensive study there has been limited convergence on the components and causes of project completion. De Wit (1988) and many other studies make a distinction between project success and project management success. They contend that project success is measured by comparing the project outcomes to the overall objectives of the project; whereas project management success tends to be measured against the traditional measures of performance, namely, cost, time and quality. Most of the studies looked at success of project but little or none has dwelt on project completion and factors leading to successful completion of projects in the Kenyan perspective. This study combines both success and completion rates as one aspect – successful completion of projects - and looks at project completion in terms of time, cost and quality; meeting the objectives and satisfying both the client and the stakeholders. This study looks at project completion factors as those from institutional, circumstantial and individual undertaking that directly or indirectly influence successful completion.

Cooke-Davies (2002) in a study of 136 European projects executed between 1994 and 2000 by a total of 23 organizations found that 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. Sutton (2005) contends that 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. This study was on success or failure of projects. This study looks successful completion of projects in different perspective – that success of a project is when after completion of the project item can be used fully as intended. It looks at project completion from contingency factors in play perspective and wants to establish the key factors in all circumstances that enhance completion rates in secondary schools projects from Kenyan perspective to achieve vision 2030.

2.11 Summary of Literature Review

This chapter has discussed various literatures on schools project implementation and challenges they face. It discussed project completion and issues that influence projects to stall and specifically factors that affects completion of projects in Kenya including; inadequacy of finances, school principals' project management skills and competences, lack of proper involvement of stakeholders and project communication problem, also policy issues and project risks mostly due to corruption and related aspects of tribalism and nepotism in Kenya are shown as influencing the completion of project in spite of the factors that are contingent to success of the projects. Theoretical framework is based on contingency theory in considering the issues behind understanding the reason why projects completion rates is low in secondary schools in Kenya. Finally the chapter has identified the gaps to be filled and conceptual framework on which the research is conceived.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses methods used in undertaking the study. It contains research design, target population, sample size and sampling procedure. It also contains research instruments, data collection procedures and data analysis used.

3.2 Research Design

The study adopted descriptive survey method which was an attempt to collect data from members of the target population in order to determine the current status of that population in respect to the variables. The purpose of descriptive research was to determine and report the way things were, and produce statistical information about aspects of project completion that interest policy makers and educators. The design was also used in describing sampling design used, the data analysis used, and the literature information where review of various government reports like the Ministry of education reports was done. Various publications by the government, non-governmental organizations, research organizations, universities and international journals were also reviewed.

3.3 Target Population

The target population for this study consisted of all the 43 principals, 43 accountants/bursars and 43 BOMs from the 43 secondary schools in Imenti North Sub County. The study covered two divisions: Miriga Mieru West (MMW) and Miriga Mieru East (MME) covering an area of 223,659km2, The Sub County has a population of 149,144 people,(C.B.S, 2009), and has 43 secondary schools. The District Education Officer and the District Quality Assurance and Standards Officers (DQASO) in the district were also targeted. Therefore the total population for the study was 131 respondents.

Table 3.1 Target Population

Description	Population	Percentage
Head teachers	43	32.8%
BOMs chairpersons	43	32.8%
Accountants/ bursars	43	32.8%
DEO	1	0.8%
DQASO	1	0.8%
TOTAL	**131**	**100%**

Source: DEO Imenti North district (2014)

3.4 Sample Size and Sampling Procedures

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 131 members of the target population, the study used proportionate sampling method to select 98 participants as the sample size. Using proportionate sampling, there were 32 Principals 32 BOMs chairpersons and 32 Accountants. The DQASO and one DEO were purposively selected. This constituted 74.8% of the target population. The sample size was calculated at by using Yaro Yamane (1975) formulae;

$$n = \frac{N}{1+N(e)^2}$$ Where;

n = required sample size.

e = level of significance taken to be 0.05

N= the population size.

1= constant

$$\textbf{\textit{Thus,}}\ n = \frac{\mathbf{131}}{\mathbf{1+131(0.05)^2}} \mathbf{= 98}$$

Table 3.2 presents the sampling matrix.

Table 3.2 Sampling Matrix

Description	population	Sample (N)
Principals	43	32
BOMs chairpersons	43	32
Accountants/ Bursars	43	32
DEO	1	1
DQASOs	1	1
TOTAL	**131**	**98**

3.5 Data collection methods

Data was collected using different methods.

3.5.1 Questionnaires

Primary data was collected through questionnaires. Data was collected from the BOM members and school principals using a questionnaire which had closed ended questions which had 5 point Likert scale rating for easy coding, and, open ended questions for independent opinions from respondents. The questionnaire was formulated in a manner that it addressed each objective under study. They were administered by research assistants to the respondents within the specified strata. The respondents were given 1 week prior to collection of questionnaires to adequately respond to the questions.

3.5.2 Key informant Interview

This method involved scheduling for interviews with the respondents. Using the interview schedule guide the study interviewed the respondent at the apportioned time. The technique was important because the category of people had knowledgeable information on the topic of the study and at least understands what the study wanted. The method produced qualitative data. Interviews were conducted on the DEO and Sub-county on the factors influencing secondary school project completion in Imenti North District. The interview schedule gathered data on the factors in relation to management of physical facilities, project communication, school managers' competence levels and availability of funds to schools projects.

3.5.3 Documentary Data

This was employed in the first phase of the study, during proposal development, and during problem formulation. It was important to note the gaps in knowledge, criticism, and verification of previous studies and generation of new knowledge. More secondary information was collected from various sources, including institutional libraries, information offices at the ministry of education journals, books, dissertations, theses, reports internet and other articles with relevant data. The method provided information on what other studies have done in relation to schools' projects completion.

3.5.4 Participant's Observation

The study maintained a constant presence in places of work where employees were designated to work. During the visits to places of work, the researcher observed the conditions of construction projects, and the stages they were in project life cycle. The method was important because it minimized suspicions and malice on the part of respondents after clarifying the issues and purpose of the study. It also resulted to data that explain the conditions of the project's completion.

3.6 Validity of the Instrument

The instruments were validated with consultation with the supervisors. Piloting was done to test for any ambiguities and inadequacies. The questionnaire was piloted before the actual data was collected; the study conducted a pilot study in the neighbouring Imenti Central District Sub-county. The pilot study participants were 7 principals, 7 BOMs chairpersons, 6 accountants, giving a total of 20 cases, which is the minimum number of cases required for conducting statistical analysis. The purpose of the pilot study was to familiarize with the administration of the questionnaires to improve the instrument and procedure. After analysis of the pilot study, some responses which needed alterations were made. Also ambiguous items were modified and replaced with ones which elicited the required responses.

3.7 Reliability of the Instrument

Reliability is the measure to which a research instrument yields consistent results after repeated trials. The reliability of the instruments was determined by test-retest method. The tested instrument produced the same result twice and study instrument

was accepted as reliable for yielding consistent results. To check the reliability of the interview schedule, test retest formula was also applied by administering the instrument on two respondents different from the sampled one and repeating it on the same respondents after a week's interval. A correlation coefficient of 0.86 for interview schedule and 0.78 for questionnaire for BOM, principals and Bursars were obtained, therefore, both instruments were deemed to be highly reliable.

3.8 Data Analysis techniques

Data analysis began upon inspection of data collected to identify spelling errors, wrong responses and blank spaces left by the respondents. The data collected was coded and analyzed mainly by use of descriptive analysis and inferential statistics to test relationship between dependent and independent variables using SPSS program and presented using tables from frequencies and percentages of responses.

Quantitative analysis was used which involved statistical description and interpretation of data by use of inferential statistics that rely on numerical values, which were computed. Data was coded and frequency tables produced as well as other analysis processes by the aid of SPSS computer programme. This produced quantitative data values that were interpreted for meaning qualitatively and quantitatively. The data was synthesized into coherent description of what has been found out. Regression analysis was also run and correlation coefficients (R) values provided for understanding of the association that exists between the variables concerned. Qualitative analysis was also used to deduce meaning from written literature by the respondents.

The study also used Linear regression analysis taking p-value at 0.05 from test statistic to determine whether any differences could be attributed to the ordinary random factors or not. Linear regressions were used for prediction of the probability of occurrence of decision in project completion by fitting data to a logistic function. It was a generalized linear model used for binomial regression.

An explanation of linear regression began with expression of the logistic function, which took values between zero and one. The model was represented by the following function; F (y) =$\frac{e}{e+1}$

The variable Y is usually defined as $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

Where:

Y=completion of secondary schools projects = time, cost and quality

β_0= Constant

β_1 =Coefficient of independent variables

X_1 = availability of funds

X_2 = project communication

X_3 = project management skills

X_4 = stakeholders involvement

e =Error term which captures unexplained variations

3.9 Operationalization of variables

Table 3.3: Operationalization of variables

	Research objective	Type of Variable	Indicator	How to Measure Indicator	Data collection Method	Level of Scale	Type of Analysis	Level of Analysis
1.	To determine the relationship between availability of funds and completion of projects in secondary schools in Imenti north sub county;	dependent: completion of projects in secondary schools	Frequency of stoppage due finances	No. of times project stopped due to inadequacy of funds	Questionnaire Interview sch.	Nominal	Quantitative	Inferential
			Disbursement of finances to the project	Periodicity of disbursement from the source	Questionnaire Interview sch.	Nominal	Quantitative	Inferential
			Sources of finances	Sources of payment for projects	Questionnaire Interview sch.	Ordinal	Quantitative	Descriptive
			Method of payment	Method of payment for projects	Questionnaire Interview sch.	Nominal	Quantitative	Descriptive
2.	To Establish how project communication influence completion of projects in secondary schools in Imenti north sub county.	dependent: Completion of projects in secondary schools	Complexity of communication	Understanding level of the communication process	Questionnaire Interview sch.	scale	Quantitative	Descriptive
			Channels of communication	No. of communications media used	Questionnaire Interview sch.	Nominal	Qualitative	Inferential
			Types of communication	Type of communication aspects used	Questionnaire Interview sch.	Nominal	Qualitative	Descriptive
			Consistency of communication	No. of times & consistency of communications	Questionnaire Interview sch.	Nominal	Quantitative	Inferential

3.	To establish the relationship between project management skills and completion of projects in secondary schools in Imenti north sub county	Independent: completion of projects in secondary schools	Training and Work experience in project management	Types/areas &No. of trainings on project management	Questionnaire Interview sch.	Nominal	Quantitative	Inferential
				No. of years of Work experience on project management	Questionnaire Interview sch.	Nominal	Quantitative	Inferential
				Highest Education level reached	Questionnaire Interview sch.	Nominal	Qualitative	Descriptive
			Project management skills	No. of projects proposals written	Questionnaire Interview sch.	Nominal	Quantitative	Inferential
				Types of financial management skills	Questionnaire Interview sch.	Nominal	Quantitative	Descriptive
				Type of project Leadership used	Questionnaire Interview sch.	Nominal	Quantitative	Descriptive
4.	To determine the extent to which stakeholder involvement influences completion of projects in secondary schools in Imenti north sub county.	Independent: completion of projects in secondary schools	Extent of stakeholder involvement	No. of stakeholders involved in project	Questionnaire Interview sch.	Ordinal	Qualitative	Inferential
				No. of times involved key stakeholders	Questionnaire Interview sch.	Nominal	Quantitative	Inferential
			Availability of stakeholders	Availability of stakeholders in project	Questionnaire Interview sch.	Nominal	Quantitative	Descriptive
				Stages of involvement in project lifecycle	Interview sch.	Nominal	Quantitative	Descriptive

3.10 Ethical Considerations

Informed consent was sought before administering the questionnaire and interview schedule. Confidentiality and privacy were observed by not having identifiable information on the questionnaire and allowing the respondents to fill the questionnaire in privacy. The study protected and kept information given confidential and, before revealing any information, the consent of the respondent would be sought first.

3.11 Summary of chapter three

This chapter highlighted the main methods used for undertaking the study. It discussed research design adopted, target population, sampling techniques and procedures, data collection instruments used, validity and reliability, data analysis used and how the study was operationalized.

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 factors affecting completion of construction projects in 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, nature of school and position held by principals, BOM chairpersons and bursars. Data on challenges of financial resources, Project communication issues, Project Management skills and Stakeholders Involvement in secondary school projects, was also analysed, presented and interpreted.

4.2. Response Rate

A total of 96 questionnaires were given out to BOM committee for various schools to 32 head teachers 32 BOMs chairpersons and 32 Accountants. The DQASO and DEO were interviewed. Out of the issued questionnaire 81 questionnaires were returned giving a response rate of 84.6%. Table 4.1 shows the response rate.

Table 4.1 Response Rate

Description	Issued	Returned	Percentage
Principals	32	31	96.9
BOMs chairpersons	32	26	81.3
Accountants/ Bursars	32	24	75
DEO	1	1	100
DQASO	1	1	100
TOTAL	**98**	**83**	**84.6**

The response rate was good. The response rate was 84.6% was rated as very good to yield adequate data for the study.

4.3. General information

The general information included data on age, gender, level of education and academic qualification of the respondent and position held in the BOM chairs.

4.3.1 Age Distribution

The study sought to establish the age of principals, BOM and bursars and the results are presented in Table 4.3

Table 4.2: Age distribution

Age Distribution	Frequency	Percentage
Less than 30 years	7	8.4
31-40 years	26	31.3
41-50 years	40	48.2
More than 50 years	10	12.1
Total	**83**	**100.0**

Table 4.2 shows that 40(48.2%) of the respondents ranged between 41-50 years, 26(31.3%) ranged between 31-40 years with only few of the respondents 10(12.1%) and 7(8.4%) ranging more than 50 years and under 30 years respectively. This implies that the school management and BOM chairs are in their maturity age and well experienced with the school project management.

4.3.2 Gender distribution

The respondents were asked to indicate their gender. This aimed at establishing whether the study was gender sensitive while seeking the views of BOM chairs, principals and schools bursars. The gender distribution was as indicated in Table 4.2

Table 4.3: Gender distribution

Gender distribution	Frequency	Percentage
Male	57	68.7
Females	26	31.3
Total	**83**	**100.0**

From the findings as indicated in Table 4.3, 57(68.7%) were male while 26 (31.3%) were female. This implies there were more males than female respondents. The dominance of males may mean that most of the duties and responsibilities in school management through Board of management chairs attract more males than females.

4.3.3. Academic qualification of the respondents

The study sought to establish the level of education of the respondents. The results are indicated in the Table 4.4.

Table 4.4 Academic qualification

Highest education	Frequency	Percentage
Secondary certificate	0	0.0
Diploma	12	14.4
Graduate degree	53	63.9
Post graduate	18	21.7
Total	**83**	**100.0**

Study findings shows, 53(63.9%) of the respondents had attained graduate degree qualification, 18(21.7%) had attained postgraduate qualification, and 12 (14.4%) had attained diploma qualification, none of the respondents had secondary certificate qualification as the highest. This means that the BOM members had the required qualification to manage secondary school projects professionally.

4.3.4 Nature and category of sampled schools

The study sought to establish the nature and category of the schools sampled. The results are indicated in the Table 4.5 and 4.6;

Table 4.5 nature of Schools Sampled

Nature of school	Frequency	Percentage
National	1	2.3
County	16	37.2
District	26	60.5
Total	**43**	**100.0**

From Table 4.5, it is indicated that 2% of the schools sampled were national 37% were County schools while 61% were district schools. This means that the majority of secondary schools in Imenti north Sub County are categorised as district schools, the sub county also has very few national category of schools with relatively large number of county schools.

Table 4.6 Category of Schools Sampled

Category of school	Frequency	Percentage
Boarding	10	23.3
Day	5	11.6
Boarding and Day	28	65.1
Total	**43**	**100.0**

From Table 4.6, it is indicated that 23% of the schools sampled were boarding, 12% were Day schools while 65% were Boarding and Day schools. This means that the Boarding and Day schools form most of secondary schools in Imenti North Sub County only few are boarding or Day schools. This can be associated with policy that directed that all boarding schools include a day wing in their schools.

4.3.5 Successfully completed secondary school projects

Table 4.7 Projects Successfully Completed

Successfully completed projects	Frequency	Percentage
One	11	13.3
Two	15	18.1
Three	22	26.5
More than three	14	16.8
None	11	13.3
Don't know	10	12.0
Total	**83**	**100.0**

Table 4.7 indicates, (26%) of the respondents were of the opinion that three projects were successfully completed in their schools. A significant number 13% indicated that none of the project in school had been successfully completed 12% said they don't know, 18% indicated that only two projects had been completed successfully in their school while further 13% indicate that one project had been completed in their school. This could indicate probably that many projects are not successfully completed.

Table 4.8 Projects Initiated in School

Number of projects initiated in school	Frequency	Percentage
1-2	12	14.5
3-5	18	21.7
6-8	32	38.6
More than eight	6	7.2
None	10	12.0
Don't know	5	6.0
Total	**83**	**100.0**

When the respondents were further probed as to how many projects the school had initiated in the last five years, the results in Table 4.8 indicate that most schools 38% had between six and eight projects in the sampled schools. 12% said the school had initiated none, about 22% said their school had started between 3-5 projects. This shows that in spite of schools starting project few get completed and even very few gets completed successfully.

4.3.6 Work experience of respondents

The study sought to establish the number of years one has served in as a principal, BOM or school bursar according to respective specialization. The results are as indicated in Table 4.9.

Table 4.9 Work Experience

Number of years of experience	Frequency	Percentage
Below 5years	8	9.6
5-10 years	39	47.0
11-15 years	29	35.0
Over 15 years	7	8.4
Total	**83**	**100.0**

From Table 4.9, it is indicated that 39(47%) respondents had work experience of between 5-10 years 9.6% worked for the school for less than 5years, 35% had work experience of between 11-15 years, and only 8.4% had work experience of more than 15 years. This means that the majority of secondary schools management had relatively long experience of school management and school projects in Imenti north Sub County.

4.3.7 Reasons for successful completion of school projects

The study sought to establish the main factors which could lead to school projects to be successfully completed from a list provided by the study.

Table 4.10; indicate that 30.1% of the respondents indicated establishment of the source of funds to influence completion of project. Proper planning and coordination was indicated by 13.3% as having influence on project success, 19.3% indicated good leadership skills as crucial aspect to project success and 16.2% Good financial management skills as influencing project completion; these were the factors which were indicated as having greatest influence on project completion. From the table also, having disbursement channels of funds, Establishment of methods of payment, Provision of type of communication and Provision of consistent communication had the same influence on project completion with an equal number 2.4% of respondents indicating so. Establishment of simple/easy communication and Involving stakeholders frequently received attention of 4.8% as main reason for project completion. Two factors, Establishment of stages stakeholders are involved, and Knowledge of number of stakeholders involved, were shown as not important to secondary schools construction projects' completion in Imenti north Sub County.

Table 4.10 Main Reasons for completing a school project successfully

Main reason why project succeed	Frequency	Percentage
Establishment of the source of funds	25	30.1
Having disbursement channels of funds	1	1.2
Establishment of methods of payment	2	2.4
Provision of channels/type of communication	2	2.4
Establishment of simple/easy communication	4	4.8
Provision of consistent communication	2	2.4
Proper planning and coordination	11	13.3
Good leadership skill	16	19.3
Knowledge of project proposal writing	1	1.2
Good financial management skills	14	16.9
Involving stakeholders frequently	4	4.8
Establishment of stages stakeholders are involved	1	1.2
Knowledge of number of stakeholders involved	0	0.0
Total	**83**	**100.0**

4.4 Findings on the Research objectives

Details of the construction projects success in secondary schools in Imenti north Sub County under different key statements were obtained from the respondents. The statements were ranked in terms of Likert scale of strongly agree to strongly disagree so as to deduce meaning out of the results. Therefore, the details of the tables are discussed under sub headings of the corresponding statements tested.

4.4.1 Financial Resources

From Table 4.11, respondents indicated that main source of finance to fund secondary schools construction projects were from CDF and school fees which had an equal number of responses i.e. 36.1% of the respondents. Fundraising received 19.3% as the main source of funding for construction projects. While other which included donors and other sources of funds got 8.4% as the main source of finance.

Table 4.11: Responses on main source of finance to fund school construction projects

Sources of finances category	Frequency	Percentage
CDF	30	36.2
Fundraising	16	19.3
School fees	30	36.2
Others (donors)	7	8.4
Total	**83**	**100.0**

Results in Table 4.12 shows that, 55% of the respondents agreed that the main source of funds for school construction projects come from CDF, and 16% strongly agreed, only 8% disagreed. On whether Periodicity of disbursement of funds was a major challenge to project completion, 51% strongly agreed, with 25% also agreeing that it was a challenge to project completion. Methods of payment was indicated as not influencing projects completion with majority 48% disagreeing.

Finally on financial institutions availability, it was indicated as somewhat important in achieving project completion where 4% strongly agreed and 29% agreed that it influenced project completion, 31% were uncertain while 30% disagreed that financial institutions accessibility determined financial availability thus influencing successful completion of construction projects in secondary schools in Imenti North Sub County.

Table 4.12: Responses on availability of funds aspects to achieve construction projects completion in secondary schools

Response	SA	A	U	D	SD	Total
Sources of project finance influences project completion	13 (16%)	46 (55%)	17 (21%)	7 (8%)	0 (0%)	83
Periodicity of disbursement of funds is a major challenge to project completion	42 (51%)	21 (25%)	13 (16%)	7 (8%)	0 (0%)	83
Methods of pay influences project completion	0 (0%)	17 (21%)	13 (16%)	40 (48%)	13 (16%)	83
Financial institutions accessibility determines financial availability hence completion of projects.	3 (4%)	24 (29%)	26 (31%)	25 (30%)	5 (6%)	83

4.4.2 Project Communication

The study sought to establish the projects communication aspects which could lead to school projects to be successfully completed from a list provided by the study. Results in Table 4.13 show that 37.3% of the respondents indicated that letters were the most frequently used type of communication during project implementation. E-mail and posters were the least used methods of communication during implementation of construction projects. Telephone was the second most utilised method of communication with 28.9% while oral communication was indicated by 22.9% as the most frequently used communication type. This is as presented in Table 4.13.

Table 4.13: Responses on main type of communication used in completion of school construction projects

Type of communication most used	Frequency	Percentage
Letter	31	37.3
e-mail	8	9.6
Posters	1	1.2
Oral	19	22.9
Telephone/mobile	24	28.9
Total	83	100.0

The study also wanted to understand the effect of various statements and responses by the respondent on communication process aspect on projects completion in schools. Respondents were asked the frequency and consistency of communication during project implementation among stakeholders the results are depicted in Table 4.14.

Table 4.14: Responses on whether there is consistency of communication during school project implementation

Whether communication is consistent	Frequency	Percentage
Yes	25	30.1
No	58	69.9
Total	83	100.0

From the findings about 70% indicated that communication during project implementation was not consistent and frequent, this could be attributed to the fact that most of the projects are undertaken with Design-build form of project delivery with few parties involved.

Table 4.15: Responses on complexity of communication that enhances project completion

Aspect of communication	Frequency	Percentage
a good structure of communication	1	1.2
known by all project team and management	46	55.4
managing project gossip well	18	21.7
Freedom of communication	18	21.7
Total	83	100.0

On the aspects that enhance project communication for school construction projects, respondents were asked to tick the aspect that mostly would enhance project completion among the aspects given; the results are presented in Table 4.15. From the results, 55.4% of the respondents indicated that a project completion is achieved when all communication was known by all project team and management. An equal number, 21.7% of the respondents indicated that freedom of communication and managing project gossip enhanced project completion. 1.2% said a good structure of communication enhances project completion. From these finding it is clear that knowledge of by all project team and management about what is going on that is communicating effectively and getting all involved to know about the project progress, greatly enhances project success.

Table 4.16: Responses on complexity of communication used in school construction projects

Complexity of communication	Frequency	Percentage
Very simple	4	4.8
Simple	14	16.9
Somewhat complex	37	44.6
Very complex	28	33.7
Total	83	100.0

From Table 4.16 it was indicated that complexity of project communication was high with 44.6% indicating communication in schools projects was somewhat complex, 33.7% indicated it was very complex while 16.9% indicated that it was simple and 4.8% said it was very simple, this show that communication in project is a complex aspect and that it needs to be handled carefully to fully be utilised by project team as required. The study also sought to inquire various issues concerning project communication while implementing school construction project and all projects in general. From Table 4.16 respondents had varying levels of agreement on the aspects.

Table 4.17 Level of agreeableness various issues of project communications are a challenge for completion of school construction projects

Response	SA	A	U	D	SD	Total
Dysfunctional project communication influences project completion in secondary schools	1 (1.2%)	12 (14.5%)	20 (24.1%)	37 (44.6%)	13 (15.7%)	83 100%
Simplification of communication process enhances project completion	3 (3.6%)	31 (37.3%)	31 (37.3%)	14 (16.9%)	4 (4.8%)	83 100%
consistency of project communication helps project to completion	14 (16.9%)	39 (47.0%)	21 (25.3%)	8 (9.6%)	1 (1.2%)	83 100%
type of communication used play an important role to ensure completion of project	0 (0.0%)	6 (7.2%)	16 (19.3%)	35 (42.2%)	26 (31.3%)	83 100%

Results in Table 4.17 show that Dysfunctional project communication does not influence project completion in secondary schools, where 44.6% of the respondents disagreed, with further 15.7% strongly disagreeing, only about 15% of the respondents agreed with about a quarter (24.1%) being undecided, on simplification of communication process, an equal number 37.3% either agreed or were undecided, about 16.9% disagreed, with about 4.8% strongly disagreeing. Respondents were of the opinion that consistency of project communication helped project to succeed, where 47% agreed with a further 16.9% strongly agreeing to that aspect. About 9.6% disagreed and 25.3% were undecided. Finally, the type of communication used does not plays an important role to ensure completion of project since majority 42.2% of the respondents disagreed with further 31.3% strongly disagreed only 7.2% agreed while 19.3% were uncertain.

4.4.3 Project Management Skills

On this variable, the study sought to establish its influence on construction project completion in secondary schools, the respondents were asked about project management skills they possessed and the kind of training they had undergone. From the results in Table 4.18 show that 57.8% of the respondents indicated that they had not undertaken training in project Management in the past five years, while 42.2% indicated that they had undertaken training in Project management. This shows that majority of school administrators are lacking essential skills in undertaking projects in schools since they don't have training on how to manage projects.

Table 4.18: Responses on whether respondents had undertaken training in project management

Have you undertaken training in project mgt	Frequency	Percentage
Yes	35	42.2
No	48	57.8
Total	83	100.0

Table 4.19 depicts that 56.6% of the respondents agreed that they had other skills and competencies that they used during project implementation. From analysis most skills indicated were accountancy, communication and general management skills about 43.4% indicated that they did not have other skills necessary for project implementation this points to the fact that they feel they lack some competencies that would be crucial for project completion.

Table 4.19: Responses on whether respondents have other skills to undertake project completion

Do you have other skills/competencies	Frequency	Percentage
Yes	47	56.6
No	36	43.4
Total	83	100.0

Results in the Table 4.20 show that (44) 53% of the respondents strongly agreed that good leadership skills is critical to achieving project completion. About (28) 33.7% of the respondents agreed while 10.9% were uncertain that good leadership skills were crucial to project completion, only (2) 2.4% disagreed, this can be deduced that good leadership skills was very crucial to project completion and hence is needed if school project are to be completed successfully.

Table 4.20: Responses on whether good leadership kills is critical to project completion

Leadership skills is critical	Frequency	Percentage
Strongly agree	44	53.0
Agree	28	33.7
Uncertain	9	10.9
Disagree	2	2.4
Total	83	100.0

From Table 4.21, 35 (42.2%) disagreed, with 14(16.9 %) strongly disagreeing this collectively is more than 50% of the total respondents disagreeing that project proposal writing skills are very crucial for project completion. only 8(9.6%) agree while a significant number 26(31.3%) were uncertain i.e. neither agreed nor disagreed.

Table 4.21: Level of agreeableness on whether Project proposal writing skills are very essential to projects completion

Proposal writing skills are essential	Frequency	Percentage
Agree	8	9.6
Uncertain	26	31.3
Disagree	35	42.2
Strongly Disagree	14	16.9
Total	83	100.0

The study set out to examine if the financial accounting skills was very important in ensuring projects are completed in secondary schools. The details of the results are presented in the Table 4.22. From the table it is clear that 37(44.6%) of the respondents disagreed that financial accounting skills were very important in ensuring projects succeed in secondary schools. Only 10 respondents said that it was important, with 1(1.2%) strongly agreeing and 9(10.8%) agreeing. About 27(32.5%) were uncertain about importance of financial accounting skills.

Table 4.22: Financial Accounting skills is very important in ensuring projects completion in secondary schools

Financial Accounting skills is important in projects	Frequency	Percentage
Strongly Agree	1	1.2
Agree	9	10.8
Uncertain	27	32.5
Disagree	37	44.6
Strongly Disagree	9	10.8
Total	83	100.0

From the results in Table 4.23, it is clearly evident that respondent agreed that Principals did not have adequate project management skills as reflected by 37(44.6%) disagreeing, 13(15.7%) strongly Disagreed. A large percentage 24(28.9%) were uncertain whether adequacy in project management skills was necessary for all school projects to succeed.

Table 4.23: principals' adequacy of project management skills necessary to ensure all school projects completion

Principals have adequate project management skills	Frequency	Percentage
Strongly Agree	2	2.4
Agree	7	8.4
Uncertain	24	28.9
Disagree	37	44.6
Strongly Disagree	13	15.7
Total	83	100.0

The study show that 2 (2.4%) and 7(8.4%) strongly agreed and agreed respectively that school Principals had adequate project management skills necessary to ensure all school projects succeed. This indicates that respondents were of the opinion that principals needed to be trained or acquire project management skills for projects completion in efficient and effective manner.

Table 4.24: Other skills essential in project management necessary to ensure all school projects completion

Other Skills Essential in Project Management	Frequency	Percentage
Report writing to BOM	10	12.0
Consultancy skills	36	43.4
General Management skills	20	24.1
Public Relations and Political science	15	18.1
Others	2	2.4
Total	83	100.0

From Table 4.24, 36(43.4%) of the respondents, indicated that consultancy skills was most essential skill in project management for completion of school projects, 10(12%) said report writing skill was essential, 20(24.1%) were of the opinion that general management skills was most essential, while 15(18.1%) said public relations and political science skills are most essential in project management. Only 2(2.4%) suggested other skills not indicated are more essential in project management.

4.4.4 Stakeholders Involvement

The study sought to establish the influence of stakeholders' involvement on successful implementation of construction project in secondary schools. The respondents were asked about the number on average of stakeholders involved while implementing any particular project at school. From the results in Table 4.25, respondents indicated that most schools involved three stakeholders while undertaking construction projects. This was revealed by 38(45.8%) of respondents who indicated three stakeholders were involved. Those who indicated involvement of more than four stakeholders were 13(15.7%), while those who pointed out as to involve only one stakeholder were the least 4(4.8%). This indicated that schools involve various stakeholders while implementing construction projects.

Table 4.25: Number of stakeholders involved while implementing school project

Number/ quantity	Frequency	Percentage
One	4	4.8
Two	17	20.5
Three	38	45.8
Four	11	13.2
Other (specify)…….	13	15.7
Total	83	100.0

The results of the study as reflected by Table 4.9 indicate that 38(45.8%) of the respondents were of the opinion that most of time three stakeholders are normally involved in construction projects, further, they pointed out that the school BOMs, the government and the financier were the main stakeholders involved other included the

community and the church sponsoring the institution. 17(20.5%) said only two stakeholders were normally involved while about 13(15.7%) said more than four stakeholders were involved. This shows that stakeholder's involvement was varied in schools but most schools involved three stakeholders.

Results of the study as reflected in Table 4.26 indicate that 36 (44.6%) of the respondents agreed that the there was high level of involvement of stakeholders in projects in secondary schools. But 34 (40.9%) disagreed that the frequency of involvement was not high throughout the projects life cycle. The high level of involvement to key stakeholders can be attributed to hiccups and various blocks at the initiation of any project but once the project has began and everything is in place, the level of involvement goes down. 39(47.0%) of the respondents also agreed that there are many stages of involvement of stakeholders to projects – probed further they indicated that stakeholders should be involved in basically all stages from initiation to termination of the projects.

Table 4.26 level of agreeableness various issues of stakeholders' involvement in completion of school construction projects

Response	SA	A	U	D	SD	Total
There is high level of involvement to key stakeholders	1 (1.2%)	37 (44.6%)	26 (31.3%)	12 (14.5%)	7 (8.4%)	83 100%
Frequency of stakeholders involvement is high throughout the project lifecycle in schools	1 (1.2%)	3 (3.6%)	31 (37.3%)	34 (40.9%)	14 (16.9%)	83 100%
There are many stages of involvement of stakeholders for successful completion of projects	14 (16.9%)	39 (47.0%)	21 (25.3%)	8 (9.6%)	1 (1.2%)	83 100%
Non-enforcement of laws lack of political and personal commitments as well as low level of information are key barriers regarding stakeholders' involvement,	21 (25.3%)	37 (44.6%)	16 (19.3%)	6 (7.2%)	3 (3.6%)	83 100%

The study also found out that most respondents said that key stakeholders to a project should be involved in all policy and decision making for any project. If implementation strategies are developed at the district or school level, local stakeholder groups may be more inclined to become involved than if implementation is intended at the district or provincial level. The survey revealed that about 36.7 percent of the responses indicated

that non-enforcement of laws regarding stakeholders' involvement in the country, lack of political and personal commitments as well as low level of information available to stakeholders for participation were the key barriers for effective stakeholder involvement in project implementation among secondary school construction projects in Imenti north Sub County.

4.5 Regression Analysis

The study undertook a regression analysis to establish the association between the independent variables with the dependent one. Table 4.27 shows the coefficients on the influence of the individual independent variables on the dependent variable. The Beta coefficients indicated the extent to which Successful Completion changes due to a unit change in the independent variable. The positive Beta coefficients indicate that a unit change in the independent variable leads to a positive change in successful completion of projects; a negative Beta coefficient indicates an inverse effect between the variables in that a unit change in the independent variable leads to a negative change in successful completion of projects.

Table 4.27: Regression Coefficients –Completion of Secondary School Construction Projects in Imenti North Sub County

Response	B	Std error	T	Sig.
(Constants)	0.139	0.221	-0.628	0.532
Availability of funds	0.606	0.097	6.247	0.000
Project communication	0.072	0.067	1.077	0.285
Project management skills	0.177	0.073	2.435	0.017
Stakeholders involvement	0.272	0.083	3.283	0.002

Table 4.27 presents the level of significance at p-value of 0.05. This is the coefficient that was used to research questions and the significance of the independent variables. The p-value of availability of funds, project management skills and stakeholders' involvement are each below 0.05. This means all these variables are significant in influencing the completion of secondary school construction projects. Project communication had p-

value of 0.285 this shows that it was insignificant indicator of project completion. Three variables availability of funds, stakeholders' involvement and project management skills are the most significant variables in explaining completion of secondary school projects in Imenti north Sub County, they are positively co-varied. Detailed analysis is presented in appendices IV and V. The R^2 value was indicated as 0.66 or 66%.

4.6 Qualitative Analysis

From the qualitative data collected and analyzed, it was found out that most key interviewed respondents indicated that the type of projects approach applied in the sub-county was Design Build (D-B). It was also pointed out that most projects in secondary schools in Imenti north sub-county had been implemented but not successfully as per customers' requirements. The respondents seemed to agree that the Stakeholder involvement can use some methods to identify, recruit and structure the involvement of diverse stakeholders throughout the school project planning process. The methods pointed out include: Recruit Stakeholders; Educate Stakeholders; Refine Local Vision, Goals and Objectives; Manage Stakeholder Meetings; Hold Neighborhood Consultation Meetings and, Incorporate External Plan Review. These methods can help align the resources of stakeholders toward common goals and are essential in adopting and implementing any school construction plan. Stakeholder involvement helps ensure that the project plan is realistic and scientifically sound, and that it reflects community values and desires. The goal is to progressively transform stakeholders into partners that support and implement the plan. Respondents rated the frequency of disbursement of finances to the project as a major barrier to their implementation this in turn led to project stoppage rate to be high and thus their completion time and quality becomes an issue to the customers.

The respondents interviewed also pointed out that they have some training in project management but not as a core course. They said the training was actually very useful in utilizing its skills in guiding the key stakeholders on project implementation. They said that all principals in secondary school needed a refresher course or a course in project management for project to be implemented successfully in the schools.

CHAPTER FIVE
SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of the study, discussion, conclusions, recommendations and suggestions for further study. This part presents the summarized results and interpretation of findings based on the study objectives as established at the beginning of the study.

5.2 Summary of findings

A total of 96 questionnaires were distributed to the respondents, 81 of them responded indicating a response rate of 93%. Two (2) key informants were interviewed. Quantitative data was organized in frequency counts and converted into percentages for clear interpretation. From the findings, most respondents were males (68.7%), while female respondents were few (31.3%). Majority of respondents were aged between 31to 50 years (79.5%) representing middle aged population who are educated and have some skills for project management with (63.9%) of the respondents having degree qualification. Most of the respondents had average working experience of between 5-10 years. Most schools in the sub county were district schools represented by (60.5%), and are mostly day and boarding type (65.1%).

The findings indicated that most secondary schools had three construction projects successfully completed and that most schools have had between 6-8 projects that had been done. On main reasons given that would ensure projects are completed successfully included: establishing proper source of funding (30.1%), proper planning 13.3%, good leadership skills 19.3%, good financial management skills 16.9%, stakeholders' involvement and simple and clear communication lines with project team. The main sources of funds in secondary schools in Imenti North Sub County come from school fees and CDF which were indicated by 36.1% of the respondents. They also indicated that the rate of project stoppage was high due to lack of funds. Source of funds were indicated as the main challenges that impede completion of projects in secondary schools with 55% of

the respondents indicating so, periodicity of disbursement, methods of payment and financial accessibility were also indicated as contributing to project completion in secondary schools in Imenti north sub county. Respondents pointed out that communication factors in project management enhances project completion in secondary schools. Complexity of communication was also another aspect pointed out as a challenge to successful completion of projects; however Project communication had p-value of 0.285 which shows that it was insignificant indicator of successful project completion.

Three variables availability of funds, stakeholders' involvement and project management skills were the most significant variables in explaining completion of secondary school projects in Imenti north Sub County, they were positively co-varied. The p-value of availability of funds, project management skills and stakeholders' involvement were each below 0.05.

5.3 Discussion of findings

Among all the factors analysed, project communication as a variable affecting successful implementation of projects was indicated as insignificant though from result, most aspects associated with proper communication were indicated as important with coefficient 0.073. That use of letters, mobile phones, and telephones, and oral communications were the main communication types used by secondary schools management while undertaking construction projects in secondary schools. Consistency of communication was indicated as a major challenge with 69.9% indicating that there was no consistency of communication during project implementation. Other aspects indicated as also as not very crucial to project completion included; dysfunctional communication, simplification of communication and types of communication, if these aspects are given more attention the projects would be well implemented but it's not a guarantee they would be completed successfully. Project communication had p- value of 0.285, an indication that was somehow insignificant indicator of successful project completion.

This was in contrast with Frese (2003) who pointed out that projects are about communications and that lack of communication is very costly to an organization. Availability of funds as a factor that contributes to successful completion of construction projects was a crucial factors since it had a significance level of 0.000 which is a very strong correlation which means among other variables, availability of finances was a key indicator of whether a project will succeed or not. This is in line with other studies like Mugo (2013) who pointed out that lack of proper funding in secondary schools and lack of follow up on funds funded was affecting implementation of project in secondary schools in Kenya.

Project management skills was indicated as crucial to project completion in secondary schools, 57.8% indicated training in project management as important. Most project managers in secondary schools have got other skills, this can be explained by the fact that that though the skills are important, projects fail to be completed successfully due lack of proper project management skills of school principals. Other skills like good leadership skills, proposal writing skills and financial accounting skills were indicated as crucial skills to ensure success in project management. Consultancy skills in project, general management skills and public relations skills were pointed out as important to project managers to successful completion of school construction projects. This is in line with study conducted by Ondari, & Gekara, (2013), who pointed out that management support and skills, is a significant factor to successful project completion. On regressing project management skills and project completion, there was a positive correlation at 0.017 significant levels; this shows that any variation in project management skills is positively correlated to project completion in secondary schools.

Finally, stakeholder's involvement was indicated as also an important aspect to project implementation. Respondents indicated that most schools utilized mainly three stakeholders including; the school administration, BOMs and the government. 44.6% agreed that stakeholders' involvement enhances successful project completion, frequency of involvement, stages/methods of involvement; non-enforcement of laws regarding stakeholders' involvement in the sub county; lack of political and personal commitments

as well as low level of information available to stakeholders for participation, are the key barriers for effective stakeholder involvement in project completion. stakeholders involvement had a significance of 0.002 which is a strong positive correlation with construction project completion , this show that the factor is an important indicator to projects' successful completion and it is in line with Ndagi (2013) that project are not completed successfully due to lack of coordination among various stakeholders

The results have indicated the p-value of availability of funds and stakeholders' involvement was each zero. Thus, these variables are significant in influencing positively the successful completion of school construction projects. The fourth variable, Project management skills had level of significance (p-value) greater than 0.05 which indicates that this independent variable is not significant in explaining successful completion of school projects.

Finally qualitative information show that the type of projects approach applied in the sub-county was Design Build (D-B). Most projects in secondary schools in Imenti north sub-county have been completed but not successfully as per customers' requirements. The Stakeholders involvement can use some methods to identify, recruit and structure the involvement of diverse stakeholders throughout the school project planning process. The methods pointed out include: Recruit Stakeholders; Educate Stakeholders; Refine Local Vision, Goals and Objectives; Manage Stakeholder Meetings; Hold Neighborhood Consultation Meetings and, Incorporate External Plan Review. These methods can help align the resources of stakeholders toward common goals and are essential in adopting and completing any school construction plan as pointed out by Ondari, & Gekara, (2013).

5.4 Conclusion of the study

From the study, it can be concluded that the factors investigated had influence on successful project completion in secondary schools in Imenti north Sub County, these were; availability of funds, project communication processes, project management skills and stakeholders involvement. In fact all the factors reviewed in this study have an effect on project implementation and completion. Though the most significant factor that was

statistically shown as very crucial to projects completion was availability of funds with *p*-value of 0.000 and *t* value of 6.247, other factors with an exception of project communication were also shown as significant.

The findings showed that there was a significant relationship between three independent variables and successful completion of projects. Amongst all the independent variables, availability of funds statistically was seen to have the most significant relationship with successful completion of projects. The findings on financial availability further supported early studies which state that financial difficulties are the major cause of suspension of works in construction projects leading to delay in the timely completion of projects. This study particularly showed that the secondary schools in Imenti north Sub County lacks adequate funding, adequate project management skills for school principals and adequate involvement of stakeholders required to successfully complete school construction projects.

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 equipments. Donor funding on the other side are smoothly disbursed and most cases the contractor receives the money within the scheduled period. Projects funded under Government – Donor partnerships also take slightly a long time for funds to be disbursed since the harmonization of disbursement approach between government and the donors eats into the projects time and thus contributing to delay of school projects completion, as pointed out by Ondari & Gekara, (2013).

Donor funded school construction projects once approved are expected to be completed within the set design framework and contractors are expected to sign commitment towards adherence which are closely monitored and supervised but this is usually not the case as the study found out. In some cases school construction designs were highly exposed to design changes due to terrain and funding constraints to land ownership issues and government policy complications. These issues usually lead to construction delays.

5.5 Recommendations

From the study, the following recommendations have been derived to improve on the timely and successful completion of school construction projects;

1. To achieve proper financial management in secondary schools in Kenya, the government can intervene through proper mechanism in payment of school fees to enable availability of funds through- out project life cycle; Additional finances for the operations of the schools could be done through agricultural projects, and other competitive endeavors like essay competition which are directly aimed at winning funds for the schools.
2. Adequate funding and resources should be availed to enable standards and quality assurance officers to reach as many schools as possible in the country.
3. Training of school principals on project management skills and financial accounting and auditing skills to be improved and given more attention in order to achieve project financial controls;
4. Every school needs to employ an internal auditor to achieve proper financial management;
5. Monitoring and reporting mechanisms and use of e-mails and letters need be streamlined for good and efficient communication.
6. There is need to involve key stakeholders throughout the life cycle of the project who would give more option and proper assessment as the project progresses to completion.
7. The study recommends that the Government through the concerned Ministry and Departments like CDF re-look at the procedure/ process of remitting funds for school construction projects with a view to reducing the time it takes to commence after approval has been granted.

5.6 Suggestions for Further Research

The study suggests that:-

1. A study to investigate other factors which could affect completion rates of school infrastructure projects in schools like management support which was alluded by respondents as a crucial aspect, contractors capacity, leadership strategies, achieving harmony among all stakeholders and simplification in communication channels should be undertaken.
2. There should be a deliberate attempt to conduct a similar study which establishes the relationship of management's commitment based on the same factors on construction projects completion in other institutions in Meru County and elsewhere in Kenya.

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APPENDICES

APPENDIX I: LETTER OF TRANSMITTAL

Celina Kathambi
Thuura Secondary School
P. O. Box 748 - 60200
Meru

Dear respondent,

I am a student of University of Nairobi pursuing master's degree in project planning and management (school of continuing learning and distance education). I am conducting a research study on; FACTORS AFFECTING COMPLETION OF CONSTRUCTION PROJECTS IN SECONDARY SCHOOLS IN IMENTI NORTH SUB-COUNTY, MERU COUNTY

The purpose of this study is to obtain your opinion in the aforementioned area. The study findings will benefit the education official, the government and other education stakeholders, so as to improve infrastructure education standards in this region and even beyond. The feedback will be available to the principals and other groups at request.

Your answers to the questionnaires will be completely confidential. No individual will be identified. I will do the analysis. Please complete the questionnaire and send it completed by 21st Sept 2014 in the attached envelop.

Thanking you in advance.
Yours Sincerely,

_____

Celina Kathambi
Student University of Nairobi

APPENDIX II: INTERVIEW SCHEDULE

School projects status survey

Kindly provide a response to each of the guided questions below as instructed. There is no correct or wrong answer to individual questions as this survey is intended to gauge opinion. All entries will be handled in the strictest confidence.

BACKGROUND INFORMATION

Project's Name: _____ Status: _____

Institutions name: _____ Main stakeholder: _____

Sub-County: _____ Zone: _____

Location: _____ No. of project handled 2013/14:_____

SECTION A: GENERAL INFORMATION

1. Type of project approach used in this sub-county(√)

   Design-Build (D-B) ☐ Design-Bid-Build (D-B-B) ☐

2. What is your Gender (√)

   Male ☐ Female ☐

3. What is your age bracket? (√)

   20 years and below ☐ 21-30 years ☐

   31-40 years ☐ 41-50 years ☐

   Over 51 Years ☐

4. What is your highest education qualification?

5. How many secondary school projects do you think have not been completed successfully in this sub-county?

6. Which is the main reason why school project fail to be completed?

7. Do you think Traditional approaches to project management shifts the project teams' focus away from the end result toward developing recommendations, new technologies, and partial solutions which lead to project Failure?

8. Which methods do you use to involve stakeholders in projects

SECTION B: AVAILABILITY OF FINANCES

9. How do you rate the frequency of disbursement of finances to the project?

10. What is the rate the stoppage of school projects due to lack of funds?

11. The following are some statement about your feeling on reason projects completion rates are low due to funds availability 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

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

SECTION C: PROJECT COMMUNICATION

12. How does project communication contribute to school project to be completed successfully?

13. Which is the most important aspect for initial project communication that contribute high project to completion rates? (√)
    a. Preparation of project outline /feasibility plan (...)
    b. Identification of the process of communication (...)
    c. Preparation of detailed plan (...)
    d. Preparation of budget estimates (...)
    e. Preparation of tender documents (...)

f. All stages (...)

g. Other (pls state) ……. (...)

14. The following are some statement about project communication why school project may fail to be completed; indicate your level of agreeableness by ticking (√) most appropriate choice.

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

	Question	**1**	**2**	**3**	**4**	**5**
a.	Dysfunctional project communication creates overlapping and conflicting agendas					
b.	Simplification regarding project communication process, scope, and management ensures high completion of projects					
c.	Consistency in communication leads to high project completion rates					
d	The type of communication channel used play a big role in the successful completion of projects					

15. Which type of communication do you use mostly when implementing school construction projects in this county?

SECTION C: PROJECT MANAGEMENT SKILLS

16. The following are some statement about project management skills and competencies Indicate the extent to which you agree or disagree that the following inadequate project management skills lead to low project completion rates by ticking (√) most appropriate choice.

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

	Question	**1**	**2**	**3**	**4**	**5**
a.	Leadership skills of the project team leader is very crucial for successful completion of projects					
b.	Skills in Writing project proposal and Directing all the activities of the project is key to successful completion of projects					
c.	There is Low finance skills on principals in secondary schools					
d.	Most of principals do not have adequate report writing skills					
e.	Most principals and BOMs are poor in Negotiating for project resources					
f.	Communicating details of project to stake holders ensures the successful completion of projects					

17. Have you been trained on project management? (√) Yes (...) No (...)
18. How many training you have undertaken related to project management ?

    ……

19. Was the training useful for achieving successful completion of projects in your area of jusirisdiction? Explain ……
20. What is the completion rates for secondary school projects you have handled/supervised ?

    Very high (…) high (…) low (…) very low (…)

21. What factors related to competencies can you give for a project to succeed ?

……

……

SECTION D: STAKEHOLDERS INVOLVEMENT

22. The following are some statement about your feeling on stakeholders' involvement in project implementation; indicate your level of agreeableness by ticking (√) most appropriate choice.

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

	Question	**1**	**2**	**3**	**4**	**5**
a.	There is high level of involvement to key stakeholders					
b.	The frequency of stakeholders involvement is high throughout the project lifecycle in secondary schools projects					
c.	The involvement of stakeholders is only on few occasions during project implementation					
d.	Non-enforcement of laws lack of political and personal commitments as well as low level of information are key barriers regarding stakeholders' involvement,					

23. Give any other information that is useful to this study

……

……

Thank you for your co-operation.

APPENDIX III

QUESTIONNAIRE FOR SCHOOL PRINCIPALS, BOMs 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 **Factors Affecting Completion of Construction Projects in 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 age?

Less than 30 years	( )	31 – 40 years	( )
41– 50 years	( )	More than 50 years	( )

2. What is your gender?

Male	( )	Female	( )

3. What is your highest Education qualification?

Untrained	( )	Diploma	( )
Graduate	( )	Post Graduate	( )

4. What is the nature of your school?

National	( )	County	( )
District	( )	other	( )

5. How many construction projects do you think have been completed successfully in this school

One	( )	more than three	( )	Two	( )
none	( )	Three	( )	don't know	( )

6. What category is your school?

Day	( )	Boarding	( )	Day and boarding	( )

7. Has your school undertaken a construction project in the past five years?

Yes	( )	No	( )

8. If yes specify the types of project(s)

   ……

   ……

9. How many construction projects do you think have not been completed successfully in this school

One	( )	more than three	( )	Two	( )
none	( )	Three	( )	don't know	( )

10. Which is the main reason why school project fail to be completed? (√)

    a) Establishment of the source of funds ( )
    b) Having disbursement channels of funds ( )
    c) Establishment of methods of payment ( )
    d) Provision of channels/type of communication ( )
    e) Establishment of simple/easy communication ( )
    f) Provision of consistent communication ( )
    g) Proper planning and coordination ( )
    h) Good leadership skill ( )
    i) Knowledge of project proposal writing ( )
    j) Good financial management skills ( )
    k) Involving stakeholders frequently ( )
    l) Establishment of stages stakeholders are involved ( )
    m) Knowledge of number of stakeholders involved ( )
    n) All the above ( )
    o) None of the above ( )
    p) Other (Specify)_____ ( )

11. Traditional approaches to project management shifts the project teams' focus away from the end result toward developing recommendations, new technologies, and partial solutions which lead to low project completion rates

    Yes ( ) No ( )

PART B: FINANCIAL AVAILABILITY FOR PROJECTS

12. What is the main source of finance to fund school construction projects?

    CDF ( ) MOE ( ) fund raising ( ) school fees ( )

    Other…….. ( )

13. Indicate the extent to which you agree or disagree that as a school head you faced a challenge of finance in implementing school projects. (***Tick (√) appropriately)*** **KEY:**

    Strongly agree- 1; Agree- 2; Uncertain- 3; Disagree- 4;

    Strongly Disagree- 5

	Question	**1**	**2**	**3**	**4**	**5**
i)	The source of finance to fund the project is a major challenge and determines successful completion of projects					
ii)	The periodicity of disbursement is a major challenge and determines successful completion of projects					
iii)	The method of payment for school project is a major challenge and determines successful completion of projects					
iv)	Accounting and finance errors, such as vendors paid twice, budgeting, management, accounting and auditing problems greatly determines successful completion of projects					

14. What other aspects of financial availability do you find very essential in management of school projects

    .....

    .....

PART D: PROJECT COMMUNICATION

15. If yes specify the type of communication channel you used to tell stakeholders in project

    Letter ( ) email ( ) posters ( ) orally ( ) Telephone ( )

16. Have you been consistency in project communication?

    Yes ( ) No ( )

17. How complex is the project communication process channel used to disseminate information

    Very simple ( ) simple ( ) somewhat complex ( ) very complex ( )

18. Indicate the extent to which you agree or disagree that as a school head you faced a challenge in the following issues on project communication in implementing school projects

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

	Question	**1**	**2**	**3**	**4**	**5**
i)	Dysfunctional project communication creates overlapping and conflicting agendas					
ii)	Simplification regarding project communication process, scope, and management ensures successful completion of projects					
iii)	Consistency in communication helps the project to be completed					
iv)	The type of communication channel used play a big role in the successful completion of projects					

19. What other communication issues do you find very essential in management of school projects.....

.....

.....

PART C: PROJECT MANAGEMENT SKILLS

20. Has the principals undertaken any project management training for implementing development project in the school past five years?

    Yes ( ) No ( )

21. If yes specify which areas of project training ……..

.....

.....

22. Does the school principal have any other skills/competency in project implementation?

    Yes ( ) (specify)……. No ( )

23. Indicate the extents to which you agree or disagree that you are faced with challenge in the following project management skills for school projects

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

	Question	**1**	**2**	**3**	**4**	**5**
i)	Leadership skills of the school principal is very crucial for successful completion of projects					
ii)	Skills in Writing project proposal by the principal is key to successful completion of projects					
iii)	Principals who have more skills financial management influence greatly successful completion of projects					
iv)	Most of principals do not present project progress reports to other school administrators and stakeholders					
v)	Most school administrators are poor in Negotiating for project resources					
vi)	Communicating details of project to stake holders ensures successful completion of projects					

24. What other skills do you find very essential in management of school projects

    .....

    .....

SECTION D: STAKEHOLDERS INVOLVEMENT

25. How many stakeholders do you involve while implementing any particular school project?

    One (…) Two (…) Three (…) Four (…) Other (specify) ……(…)

26. The following are some statement about your feeling on stakeholders' involvement in project implementation; indicate your level of agreeableness by ticking (√) most appropriate choice.

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

	Question	**1**	**2**	**3**	**4**	**5**
i)	There is high level of involvement to key stakeholders					
ii)	The frequency of stakeholders involvement is high throughout the project lifecycle in the school					
iii)	There are many stages of involvement of stakeholders for a successful completion of projects					
iv)	Non-enforcement of laws lack of political and personal commitments as well as low level of information are key barriers regarding stakeholders' involvement,					

SECTION E: EXTENT TO WHICH THE FACTORS AFFECT COMPLETION OF CONSTRUCTION PROJECTS

27. Indicate the extent to which you agree or disagree that the following factors influence completion of secondary school project in Imenti North Sub-county. (***Tick (√) appropriately)*** **KEY: Strongly agree- 1; Agree- 2; Uncertain- 3; Disagree- 4; Strongly Disagree- 5**

	Question Item	**1**	**2**	**3**	**4**	**5**
i)	Availability of funds affects completion of secondary schools construction projects in Imenti North Sub-County					
ii)	Project communication aspects are main aspects that affects completion of secondary schools construction projects in Imenti North Sub-County					
iii)	The project management skills affects completion of secondary schools construction projects in Imenti North Sub-County					
iv)	The extent to which stakeholders are involved affects completion of secondary schools construction projects in Imenti North Sub-County					
v)	Secondary schools construction projects completion in Imenti north sub county are greatly influenced by availability of funds, communication type process, project management skills and the level of stakeholders involvement					

28. Give any other information that is useful to this study

……

……

Thank you for your co-operation.

APPENDIX IV: LINEAR REGRESSION COEFFICIENTS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-.139	.221		-.628	.532	-.579	.301					
	Availability of funds affects completion of secondary schools construction projects in Imenti North Sub-County	.606	.097	.536	6.247	.000	.413	.799	.764	.577	.413	.593	1.686
	Project communication aspects are main aspects that affects completion of secondary schools construction projects in Imenti North Sub-County	.072	.067	.073	1.077	.285	-.062	.207	.052	.121	.071	.942	1.062
	The project management skills affects completion of secondary schools construction projects in Imenti North Sub-County	.177	.073	.186	2.435	.017	.032	.322	.523	.266	.161	.751	1.331
	The extent to which stakeholders are involved affects completion of secondary schools construction projects in Imenti North Sub-County	.272	.083	.259	3.283	.002	.107	.438	.577	.348	.217	.700	1.429

a. Dependent Variable: Secondary schools construction projects completion in Imenti north sub county are greatly influenced by availability of funds, communication process, project management skills and the level of stakeholders involvement

APPENDIX V: STUDY MODEL AND ANOVA TABLE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.812[a]	.660	.642	.40176	.660	37.788	4	78	.000	1.761

a. Predictors: (Constant), The extent to which stakeholders are involved affects completion of secondary schools construction projects in Imenti North Sub-County, Project communication aspects are main aspects that affects completion of secondary schools construction projects in Imenti North Sub-County, The project management skills affects completion of secondary schools construction projects in Imenti North Sub-County, Availability of funds affects completion of secondary schools construction projects in Imenti North Sub-County

b. Dependent Variable: Secondary schools construction projects completion in Imenti north sub county are greatly influenced by availability of funds, communication process, project management skills and the level of stakeholders involvement

Source: Data (2014)

ANOVA TABLE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.398	4	6.099	37.788	.000[b]
	Residual	12.590	78	.161		
	Total	36.988	82			

a. Dependent Variable: Secondary schools construction projects completion in Imenti north sub county are greatly influenced by availability of funds, communication process, principals management skills and the level of stakeholders involvement

b. Predictors: (Constant), The extent to which stakeholders are involved affects completion of secondary schools construction projects in Imenti North Sub-County, Project communication aspects are main aspects that affects completion of secondary schools construction projects in Imenti North Sub-County, The project management skills affects completion of secondary schools construction projects in Imenti North Sub-County, Availability of funds affects completion of secondary schools construction projects in Imenti North Sub-County

Source: Data (2014)