

**CONTRACT MANAGEMENT AND PERFORMANCE OF
CONSTRUCTION PROJECTS IN UGANDA: A CASE OF UPPET /
APL1 PHASE 2, MINISTRY OF EDUCATION AND SPORTS IN
UGANDA**

By

Musiimenta Dickson

REG. NUMBER: 15/MMS/KLA/DAY/0015

**A Dissertation submitted to the School of Business and Management in
partial fulfillment of the requirement for the award of Master Degree in
Management Studies (Procurement and Supply Chain Management)
of Uganda Management Institute**

APR 2019

Declaration

I, Musiimenta Dickson, hereby declare that this research report titled, “Contract Management and Performance of Construction Projects in Uganda: A case of UPPET / APL1 Phase 2, MOES in Uganda” is my original work. It has never been submitted to any institution of higher learning for any award before.

Signature:..... Date:.....

Musiimenta Dickson

15/MMS/KLA/DAY/0015

Approval

I certify this research report on the topic “Contract Management and performance of Construction Projects in Uganda: A Case of UPPET / APL1 Phase 2, MOES in Uganda” is work done by Musiimenta Dickson (15/MMS/KLA/DAY/0015) under my supervision. It is now ready for submission.

Signed:.....

Dr. Karim Ssesanga

Signed.....

Mr. Paul Wanume

Dedication

I dedicate this book to my mum Mrs. Robinah Tumuheirwe, my dear wife Eva Musiimenta Akandwanaho, daughters Darren Murungi Katusiime and Daniella Kirabo Musiime. Thank you very much for the support you offered to me in the course of this study. May God bless you.

Acknowledgments

I wish to acknowledge the social, spiritual and financial support from my dear wife Eva A. Musiimenta. You are always a source of my smile.

My supervisors: Dr. Karim Ssesanga and Mr. Paul Wanume for the tireless scholarly guidance, and encouragement while I undertook this study. It was indeed a wonderful time to work with you.

Appreciation go to all the respondents at the MoES, the District Education and Works departments for Kenjojo, Fortpotal, Mbale and Bugiri district. More so, the other persons who were contacted at schools visited. Without mention of names, I appreciate the enormous pool of information provided from which this study gained fresh.

Mr. Byaruhanga Davis of Eden Research Centre, I appreciate your valuable contribution in availing me with day today updates on scholarly publications, typesetting this work and all printing works.

Iam grateful to staff and management of CJ Technologies and Logistics ltd for granting me a study leave. My brother Milton Bitwiromunda, I am so grateful for the courage you gave me to keep pushing even when I felt like braking. May God bless you.

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List of Abbreviations and Acronyms

ADB	African Development Bank
APL	Adaptable Programme Loan
CDF	Constituency development fund
CMU	Construction Management Unit
CVI	Content Validity Index
DEO	District Education Office
EU	European Union
KIIs	Key Informants Interviews
M&E	Monitoring and Evaluation
PMBOK	Project Management Body of Knowledge
PPDA	Public Procurement and Disposal Authority
PPT	Project Performance Timeliness
PPQS	Project Performance on Quality Standards
PCOP	Project Cost Performance
RAILPAG	Railway Project Appraisal Guidelines
SPSS	Statistical Package for Social Sciences
SS	Secondary School
UMI	Uganda Management Institute
UPPET	Universal Post Primary Education and Training Programme

Abstract

The study analyzed the influence of contract management on UPPET/APL1- PHASE 2-MoES performance of construction projects in Uganda. Specifically, the attention was on six (6) selected schools under this project. The study objectives were to analyze the influence of contract planning on performance of construction projects, determine the influence of contract controls on construction project performance and to establish the influence of contract monitoring and evaluation on performance of construction projects of UPPET / APL1- Phase 2-MoES in Uganda. A quantitative approach was used and correlational research design adopted for the study. A total of 80 respondents participated. These were selected using purposive, snowball and simple random sampling techniques. Questionnaire and documentary review checklists were used to collect the data. Data obtained was analyzed using the Statistical Package for Social Sciences (SPSS), version 20.0, and presented in form of descriptive and inferential statistics. Study findings showed that contract planning significantly ($p.000 < .005$) influenced performance of construction projects, through project cost budgeting, project scheduling and project scope activities. On the contrary, contract controls had no significant influence basing on schedule control ($p.393 > 0.05$), quality control ($p.659 > 0.05$) and Cost control ($p.060 > 0.05$) on performance of construction projects. More so, study findings showed there was a significant influence of contract monitoring and evaluation on performance of construction projects in terms of interim monitoring evaluation reports ($p. 000 < 0.05$), authorization of payments ($p.000 < 0.05$) and on contrary there was no statistical significant influence of Project Appraisal reports on construction Projects Performance ($p.731 > .05$). Contract management explains 40.9% of the performance of construction projects undertaken under UPPET/APL1-Phase 2 MoES in Uganda. Therefore it was concluded that apart from contract controls, contract management attributes of contract planning, monitoring and evaluation has a significant influence on performance of construction projects. Recommendations included need to have timely budgeting and comprehensive planning, provision for price escalation in budgeting, prompt supervision at all levels of the project to ensure project status, regular and up-to-date information. The study also noted that contract management and performance of construction projects in Government Ministries in Uganda, contract management and performance of construction projects in the private sector in Uganda were considered for further research.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presents the introduction of the study regarding the Contract Management and Performance of construction projects in Uganda. The chapter includes the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions and hypothesis, conceptual framework, significance and justification of the study, scope of the study and definitions of operational terms.

1.1 Background to the study

The fact that one failed project can potentially wipe out an entire year's profit should help in putting project controls into perspective during contract management. This is a reflection on the value attached to contract management and performance of the construction projects in an organisation.

According to PMBOK (2018) a project is a temporary endeavor undertaken to produce a unique product, service or result. Takim and Kelly (2004) considers a project as a pending activity available for implementation and execution which can be measured by the project's quality, timelines, budget compliance and customer's degree of satisfaction.

1.1.1 Historical background

Construction management as well as contract management is not a new concept. It traces history to the early 1960s' projects during the Second World War (George, 2011). The post WW2 high global inflation rates left the professionals less interested in management of projects to the owner. Consequently, most projects owned by the public sector, corporations and nonprofit organizations run into delays, cost overruns yielding to poor quality work. This was subsequently considered to be a bearing of contractors, although

owners, architects, contractors and engineers were also to blame. This led to inception of the idea to always engage professional construction managers and giving birth to professional contract management.

Construction projects performance on time, cost and quality remained an issue of great concern and a management issue. However by mid 1960s, the ardent need of a professional construction management became increasingly evident. A professional construction management specialist is one who can successfully deal with issues of time and cost control in the construction process (Jackson, 2014).

Several other studies on contract management are being undertaken by different scholars across the globe and Uganda inclusive. Over 67% of the projects done globally is by contract and it is believed that if contracts are not managed properly, their ability to yield timely, accurate and effective results remains futile and an indication of less successful performance. Contract management effectiveness remains a core area of concern in professional practices. The trend is however still low in Sub-Saharan Africa though developing economies are progressively taking root (Halldorsson, 2006).

In Uganda, little empirical evidence does exist on the determinants and constraints to effective contract management (Oluka & Benon, 2011). It is suggested that performance of a project in a successful manner can be measured on a basis of time, cost and quality parameters. As a result contract management could be of great effect in project performance levels (Benon & Milton, 2011). Nevertheless, it is indicated that construction projects in Uganda have not performed well on these parameters. However the study (Benon & Milton, 2011) was limited to contractors only leaving other parties like the owner, users, funders and consultants who also key actors in projects during contract management aside. Thus there was still a need to undertake more studies on the influence

of contract management on performance of construction projects by other stakeholders to match with project objectives.

1.1.2 Conceptual background

Contract Management is viewed in different dimensions of project planning, control, evaluation and monitoring. Contract monitoring entail matching cost with time during project implementation. Thus different methodologies may always have to be employed to deal with these parameters. According to the project monitoring and control procedure OSI-AP-08-14 (2008), Contract control is three dimensional namely; schedule control, cost control and quality control.

During contract management different roles and responsibilities are under taken. Key parties necessary for contract management include; a financial analyst to undertake tracking and controlling project cost and preparation of project reports, a project manager to undertake the execution of project management plans as well as continuously managing and evaluating overall project performance. Success of a project which determines the degree of performance for a project depends on the project management as well as contract management. Success factors may be project related, clients related, consultant related, contractor related, supply chain related or external environment related (Ngacho, 2013). Well undertaken contract management can be useful in reflection to what the contract outcome may be; when assessed on Key performance Indicators.

Contract performance entails the outcomes and end product of the contract as per defined terms and conditions. Several times contract performance is a product of many factors: time, inputs, and human resources (Ngacho, 2013). The successfulness of any contract and hence effective contract management while utilizing the above named factors yield to the expected end-product. This study was focused on the concepts of contract management

and construction projects performance and a review of how they are related. Contract management was analyzed on the basis of how contracts are planned for, monitored, evaluated, controlled, and implemented in relation to its influence on construction projects performance in Uganda.

In measuring project performance, one aims at gathering information to help in making management decisions effect change that hopefully will improve performance basing on performance measures of the project. These measures should be appropriate to the organizational level that can immediately effect change bases on information it learns in order to control performance of the project at hand. This can further help project managers in making critical decisions to bring the project to closure successfully. Performance can be measured basing on productivity, cost of quality, cost performance based on earned value and actual cost, schedule performance based on earned value and planned value, cycle time, defect rate among others (James, and Penny, 2010). Project performance is also said to be measured basing on time, monitory cost and quality standards. The three criteria of time cost and quality are used to determine project success and are further identified as the iron triangle (Atkinson, 1999). The study identified and elaborated more regarding the aspects of contract management and project performance basing on the operations of UPPET/APL1 projects under the Ministry of Education and Sports in Uganda.

1.1.3 Theoretical background

This study was guided by the Parkinson's theory as conceived by Parkinson Northcote in 1955 as cited in Jochimsen, (2007). Parkinson's theory states that work expands to fill the available time for its completion. This theory is based on assumptions that project controls averts a schedule from expanding out of control, assumes that a project can be completed

within budget and that project controls takes on an established systematic procedural steps. More so, it assumes that the volume of work and the number of employees do not necessarily correlate with one another which implicitly mean that a project goes through a number of activities which define the scope of performance (Shatz, 2008). This implies the specific aspects to be measured should be specific; setting performance standards, implementing prevalent project agreements, work analysis, forecasting and measuring actual performance using a predetermined scale.

Parkinson's theory involves identifying intolerable variance from expectation, determining the expected impact of variance on overall project performance, investigating the source of poor performance, determining the appropriate control actions needed to nullify the variance observed, implementing control actions with total dedication and ensuring poor performance does not occur elsewhere in the project. The theory basically considers project controls which is a major function of contract management as viewed in OSI-AP-08-14 (2008) as well as project performance. Thus it was referred to while exploring the contract management and projects' performance in this study.

1.1.4 Contextual background

The MoES has been able to secure funding in form of loans from development partners for example in support of Post Primary Education and Training Program (UPPET), the government of Uganda secured a USD\$375 million Adaptable Program Loan (APL) from the World Bank (WB) to be implemented in three phases over ten year period (2009-2018). Phase one allocated USD\$ 150 million, phase two; USD\$125 million and Phase three: USD\$ 100million. This is to mainly increase access to lower secondary education through expansion of infrastructure and improving quality of lower secondary (UPPET Report, 2014). The MOES oversees construction projects implementation through the

construction management unit with the responsibility of ensuring fulfillment of objectives. The construction management activities within the MoES are undertaken basing in a defined hierarchy as in figure 1.1

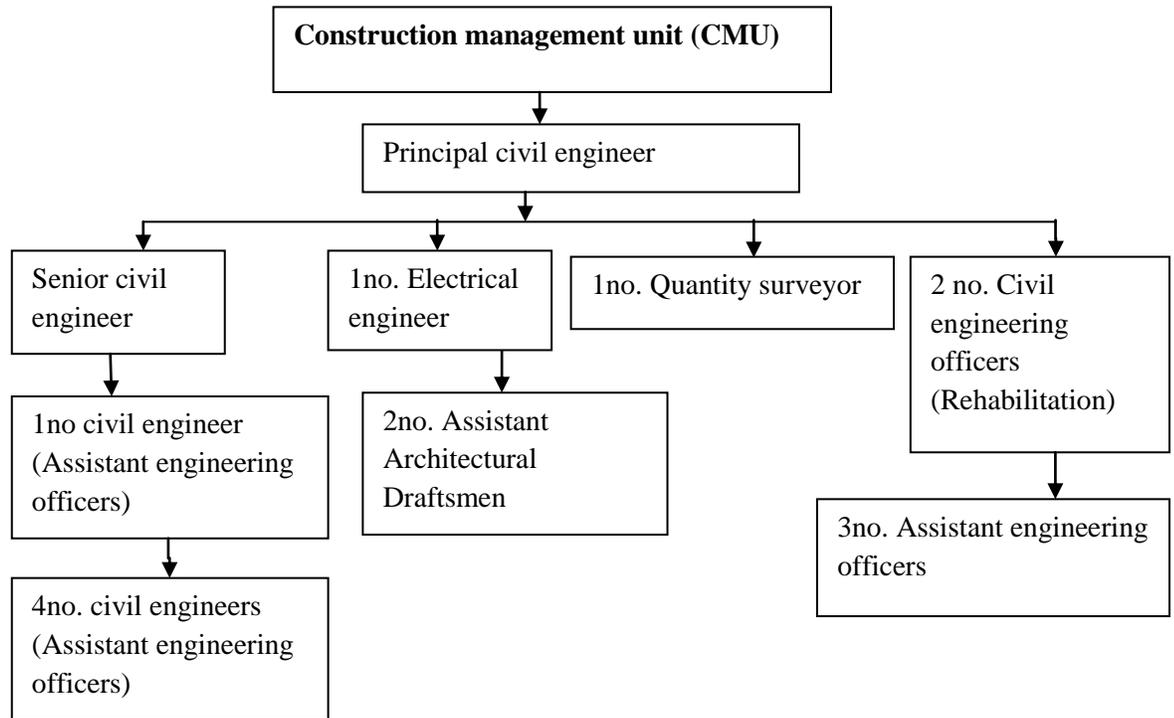


Figure 1.1: The Construction Management Unit Structure in MoES

Source: Annual report MoES (2016).

Figure 1.1 shows that a team of players is involved right from top planning machinery to the implementing officers, from level 1 to level 4. The construction management unit (CMU) after entering into a contract with a provider, delegates its powers to the principal Engineer who does the planning, control and monitoring. Together as a team of civil engineers, electrical engineers, quantity surveyors and architects, they define and manage the contract on behalf of the ministry. This is subsequently based on as tools of contract management, and bench marks for examining the effectiveness of this project performance.

1.2 Statement of the problem

The government of Uganda undertook programs of increasing on the education infrastructural facilities. This was done through partnerships with development agencies like European Union (EU), World Bank (WB) and African Development Bank (ADB). In support of Universal Post Primary Education Programme (UPPET), The Government of Uganda secured a USD\$ 375 million adaptable programme loan (APL) from the World Bank to be implemented in phases over 10 year period. As a means of ensuring successful projects, the construction management unit (CMU) within the Ministry undertakes the supervisory role through partnerships with consultancy firms to manage projects. However challenges in areas of completion schedules, budget schedules and expected quality performances had continued to emerge. According to UPPET Report (2014), there was delayed completion of works, irregularities in payments, approval of substandard works, contract periods expiring unnoticed, actual works varying from agreed scope and specifications. It was further indicated 86 schools were not handed over on time, 60 schools whose construction contract had been terminated, only 15 schools received a no objection from the funders for central procurement and 26 schools were completely dropped from the project due to non-compliance to the required standards (UPPET Report, 2014). It was anticipated if the contract management was not checked and measures put in place to align with the required performance, subsequent phases under this programme could continue to experience time overruns, cost overruns and substandard quality works. This would consequently turn down MoES mandates on investment plans, regulations, strategies, goals and objectives leading to a slowdown in the performance of MoES and closure of programme by the funding agency. It was against this background that the study sought to investigate the influence of Contract management on performance of construction projects for UPPET/APL1- PHASE 2 under MoES in Uganda.

1.3 Purpose of the study

To analyze the influence of contract management on UPPET/APL1- PHASE 2-MoES performance of construction projects in Uganda.

1.4 Objectives of the study

- i) To analyze the influence of contract planning on UPPET/APL1- PHASE 2-MoES performance of construction projects in Uganda.
- ii) To determine the influence of contract controls on UPPET/APL1- PHASE 2-MoES performance of construction projects in Uganda.
- iii) To establish the influence of contract monitoring and evaluation on UPPET/APL1-PHASE 2-MoES performance of construction projects in Uganda.

1.5 Research questions

- i) What is the influence of contract planning on UPPET/APL1-PHASE 2 –MoES performance of construction projects in Uganda?
- ii) What is the influence of contract controls on UPPET/APL1- PHASE 2-MoES performance of construction projects in Uganda?
- iii) What is the influence of contract monitoring and evaluation on UPPET/APL1-PHASE 2-MoES performance of construction projects in Uganda?

1.6 Hypotheses

- i) Contract planning has a significant influence on performance of construction projects.
- ii) Contract controls has a significant influence on performance of construction projects.
- iii) Contract monitoring and Evaluation influences on performance of construction projects.

1.7 Conceptual framework

This study was conducted basing and utilizing the following conceptual framework.

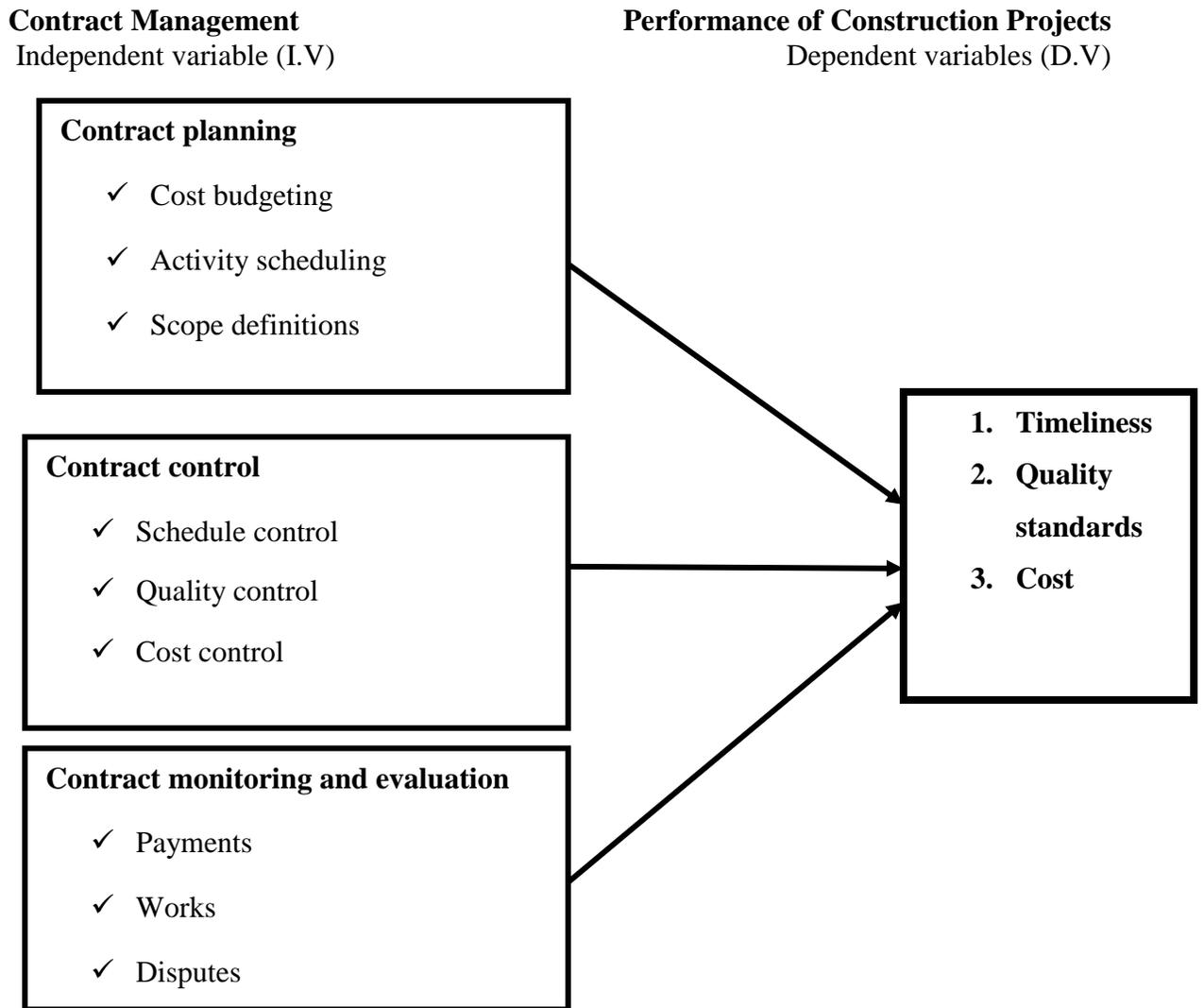


Figure 1.2: Conceptual frame work showing the independent variables and Dependent variables each with their attributes.

Source: Adopted from **Ngacho (2013)**. An assessment of the performance of Public Sector Construction Projects: An empirical study of Projects funded under constituency development fund (CDF) in Western province, Kenya and modified by the researcher.

According to figure 1.2 above, this study hypothesized that contract management is related to project performance. Contract planning, contract monitoring and evaluation, and contract controls have were singled out as contract management practices that could have an impact on the project performance levels. Ngacho (2013), argues that Project performance of construction projects are evaluated on the basis project time, cost, quality,

safety, site disputes and environmental impact, although this study basically focuses on timeliness, quality standards and cost. While these may reveal the extent by which a project is undertaken, planning is presumed to be ideal. Costing and budgeting for instance can result into timely completion of the project, by matching between projected and actual costs, and ensuring that the quality desired is feasible and falls within the budget (Svetlana & Hodgson, 2006). It can also be as a result of better scheduling, defining the scope, determining the cost and time the project, and the quality desired (Ariet & Shuli, 2015). It was hence likely that well-planned schedules, budgets and scope, can have a bearing on the project execution.

As an on-going undertaking, a project needs monitoring and evaluation of the works done. Contract monitoring and evaluation is commonly done through monitoring of payments, works and handling of the likely arising disputes. Routine monitoring of payments, works in progress and disputes can have a bearing on the time, quality and subsequently the cost of the overall project (Ballard & Howell, 2011). It is hypothesized that well undertaken project monitoring of payments, works and disputes can affect the performance of the project. More so, schedule, quality and cost controls help to reduce wastage of resources, construction halts, and using the right quantity and quality of inputs. When this is properly undertaken, it can yield to timely completion of works and better performance, as noted by Andi and Minato (2003).

Proceeding from the above presentation is that proper contract planning, monitoring and evaluation, and contract controls can have an impact on timeliness, adherence to quality standards and cost of the project. The concepts- of contract management and contract performance have been explored extensively, for instance Hammad (2015) explored these concepts, in Sweden, Rahaman (2013) undertook a study in contracts and contract

performance in Malaysia, and Kwame (2011) did a related study in Ghana. To the contrary, this had not been examined in Uganda especially studies on construction projects remain few. This study hence focused on the Ugandan construction sector, and contract management as regards to UPPET/APL1 - phase2 project under the MoES in Uganda.

1.8 Significance of the study

The study analyzed how Contracts have been managed in relation to Projects performance for UPPET/APL1-PHASE 2 under MoES in Uganda and hence was able to inform Ministry of Education and Sports on its contract management practices and performance outcomes. The results were also helpful in coming up with an informed contract management and implementation plans that are useful to the management and staff of the Contract Management Unit of MoES. It has also availed practical information regarding contract management in relation to projects' performance in Uganda to the scholars. The results of the study are important to the project funders (World Bank) in decision making for yet to be undertaken projects with MoES. To the researcher, the study also served as a fulfillment for the award of a Master degree in Management studies of Uganda Management Institute to researcher.

1.9 Justification of the study

Reports on projects undertaken within the MoES under the financing of World Bank indicated there were a lot of challenges ranging from poor quality works, delayed completion and others ending up beyond the initial budgets. Some contractors and technical consulting firms faced penalties of getting blacklisted by the PPDA from continuing with works on any of their funded projects (UPPET/APL1 project (ID: P11083; Credit no. 4570-Ug, 2014). Thus there was a need to undertake this study that was mainly to analyze how Contracts were being managed in relation to Projects performance for UPPET/APL1-PHASE 2. The study is of great help to stakeholders in

taking the informed course of action, ensure the MoES attains the desired quality (Basheka, 2012) and provide quality assurance to funders regarding project performance.

1.10 Scope of the study

The study was conducted under the following content, time and geographical scope.

1.10.1 Content scope

It mainly concentrated on contract management process in the context of; project monitoring and evaluations and controls in relation to construction projects performance. Specifically the focus was on the influence of project planning, project control and project monitoring and evaluations on construction projects performance. Reference was based on the performance for UPPET/APL1-PHASE 2 implemented by MoES in Uganda.

1.10.2 Geographical scope

In terms of geographical coverage this study focused on Eastern and Western regions where the UPPET/APL1-PHASE2 projects were implemented. Particularly, Bukooli College, Mbale Secondary School and Nkoma Secondary school were selected for the Eastern region and Kahinju Secondary school, Kabiito Secondary school, and Kyenjojo Secondary School for the western region. These regions were considered to represent not only the schools but also regions where the UPPET/APL1-PHASE 2 projects were implemented.

1.10.3 Time scope

The study was limited to a range of construction works and stages in the UPPET/APL1-PHASE 2 project from 2010-2018. This time frame was based on the duration of UPPET/APL that was launched in February 2007 (UPPET Report, 2014).

1.11 Operational Definitions of Terms and Concepts

A **project** in this study referred to any human undertaking that has a clear start and end. In the current study, a project is defined in terms of various construction activities which are undertaken within a given timeline with an object of constructed facilities for the institution.

Contract management was referred to as the process of planning, organizing and monitoring construction project activities to achieve project objectives of time, cost and quality standards as stipulated within the particulars of the contract.

Contract controls was taken as an activity undertaken to ensure projects finish on time, within budget and achieving other project objectives stipulated in the contract. In practice this is a complex task normally undertaken by contract managers and involves constantly measuring progress, evaluating plans and taking corrective actions where required (Kerzner, 2003).

Contract monitoring was taken as an aspect of contract management that involves checking, regulating and controlling performance and execution of a construction project defined in the contract.

Projects' performance was referred to as the unit of measure based on time, cost and quality of work done.

Stakeholders referred to persons or organizations like client, funders, contractors, or the public/end users who are actively involved in the project

Cost overrun referred to the amount by which the actual expenditure exceeds the budgeted cost of the project. It is otherwise termed as cost escalation

Time performance referred to the degree to which a project achieves its time targets and is measured on the basis of scheduled time and actual time taken by the project.

Contract evaluation referred to an activity undertaken to oversee all the tasks and matrices necessary to ensure that the approved and authorized project is within scope, on time and on budget so that it proceeds with minimal risks.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter is arranged into four sections. Section one looked at the theoretical review related to contract management and construction projects performance. Section two presents the conceptual review in regard to contract management and construction projects performance. Section three presents a critical review regarding the effect of project planning, control and monitoring and also construction projects performance. Section four was a summary of the literature in relation to this study.

2.1 Theoretical review

The theory relating to this study was based on Parkinson's theory drawn from the Parkinson's Law. This law was formulated basing on three assumptions that, project controls averts a schedule from expanding out of control, assumes that a project can be completed within budget and that project controls takes on an established systematic and sequential procedure.

2.1.1 Relevancy of Parkinson's theory of contract controls to the study

Parkinson theory considers time schedule and budget schedules and decisions made by contract and project managers during contract formulations and implementation. This largely relates to the areas of concern for this study. However, Parkinson does not consider the factor of quality performances yet much a construction project is finished on schedule and within the budget and is not able to fit for purpose as targeted during project formulation, performance is taken to be un successful. More so, the theory emphasized that project managers should do their jobs properly, know each other and get to know each team member's personally, strength and weaknesses, real output and reliability

under stress. This did not specify the parameters for measuring and classifying works done by project managers as well as contract managers.

2.2 Conceptual review

This section is a review on main concepts about contract management and construction projects' performance.

2.2.1 Contract Planning and Performance of Construction Projects

According to Skitmore, Martin & Runeson, Gorad and Chang (2006), success in managing a contract depends on the contract itself. Thus to get the contract right, contract management foundations must be laid in stages before award through proper planning. This project will however focus on examining the extent by which the UPPET/APL1 phase 2 was conducted in line with the contractual terms set.

In most cases, contract planning involves cost budgeting, activity scheduling, and scope definitions. Budgeting requires setting project costs, time schedules and project scope (Denise, 2012). This should be taken to include accurate and comprehensive contract statements of work defined in procurement marketing plan. However, a number of scholars including Denise (2012) have not explored the local Sub-Saharan Perspective regarding project costing and budgeting, and this could be a reason why some projects are not cost effective. Nevertheless, not all contracts prepare better budget estimates and as such its ideal to examine through this study how budgeting is done, and how relevant is the budgeting done to the function of contract management. This study therefore focused on assessing projects and specifically UPPET/APLI-phase 2 and how it was undertaken as per its scope and schedule.

2.2.2 Contract Controls and Performance of Construction Projects

Construction Projects performance problems merge after the project has been completed and this leaves performance control difficult. Thus interim factors that may be anticipated to influence final project performance should be dealt with at the start and during the progress of the project (Adedeji, 2012). This may involve controls by checking the scope, project documentations, project requirements, quality assurance aspects and the functional requirements of the project.

Time control is key, and several project managers handle this by putting in place a Gantt chart of the project. The project status should be monitored frequently, actual activity status marked on the chart (Svetlana & Hodgson, 2006).

2.2.3 Contract Monitoring & Evaluations and Performance of Construction Projects

According to Kwame (2011), during project implementation, the construction project's costs rarely remain static. Therefore monitoring and evaluation of the project must be taken as a core aspect to provide information on costs and progress. However Current practices of predicting the performance of a construction team require inspections that are still mainly manual, time consuming and can contain errors. Kwame (2011) does not focus his presentation on this from the Ugandan perspective but from the Ghanaian perspective. Thus improper understanding of the current status can lead to further errors and unsuitable adjustments by the managing team, leading to more delays and increased cost.

2.2.3.1 Interim Payments

According to the commercial tool kit (01/08/2011), interim payments made should reflect the verifiable achievements. Also further suggests appropriate retention for the final payments and interim payments are regarded as advances against the contract price.

Prompt payments are encouraged to avoid contractor claiming interests on delayed payments. This therefore helps in reducing unnecessary expenditures that could raise the project costs. Hence ensuring a steady integrated cash flow for project can result into better constructions performance. Variances and challenges related with interim payments also vary according to the projects in question; hence focus of this study was on World Bank projects and specifically the UPPET/APL1-phase 2 project at MoES in Uganda.

2.2.3.2 Payment Processes

In construction industry, a survey of the payment performance indicates it is prone to late payments Johnson (1999) as cited in (Kwame, 2011). This can be attributed by the payment approval processes by key stake holders on the project. It is further stated delayed payments to contractors result into friction between the two parties and consequently projects experience extensive delays, quality compromization and overall projects poor performance (Kwame. 2011). The noted studies especially Kwame (2011) emphasize that in a number of projects payment process is long and delayed, and this can affect project performances. This study explored into the influence of payment processes on construction projects performance in Uganda, taking a reference to UPPET/APL1 phase 2 projects.

2.2.2.4. Works and appraisal reports

According to Mateu (2003), reporting on the implementation of the project is key and a step-by-step appraisal of the construction activities is fundamental. In the view of Mateu (2003), appraisal of works is a crucial tool for those decision-makers, both in the public and private domains, responsible for the development of the transport system. While the above study of Mateu (2003), gives a detailed coverage of appraisal, it is tailored to the transport industry and less of the construction industry. This study made reference to the

above information regarding project appraisal but in the construction industry/projects in Uganda.

2.2.2.5. Disputes

Disputes arise when there is variance from the expectations as stipulated within the contractual terms. In the study by Petursson (2015), disputes in contracts management are cited to arise from any deviation at any point of contract implementation. The variance from the requirements, failure to apply the standards is high when there is minimal monitoring, and at times can result into higher in the bid-contracting sector, and that is perhaps due to the gap between stakeholders (Younis, Wood & Malak, 2012). According to Yi San (2013), disputes in construction are largely blamed on management. Internal project management or external supervisors and monitoring teams, can fail to accept the quality, and scope of work done. These circumstances however may arise, even when monitoring is done. Therefore, this study explored how disputes arise in construction projects and how they influence project performance with UPPET/UPPL1 phase 2 as a project of reference.

2.3 Critical review of literature

According to Kivetz, Urminsky & Zheng, (2006), contracting and performance have of recent been issues that co-exist and inter-dependent especially in management and execution of the projects being handled. This has given way to Contract Management and Construction Projects' Performance aspects. In specific terms, the critical review is presented on contract planning and projects performance, contracts control and project performance and contracts monitoring and evaluation on projects performance as cited below.

2.3.1 Contract Planning and Performance of Construction Projects

According to Ariet and Shuli (2015), contract planning appropriately determine project costs; ensures adequate market research and business needs; clearly define the brief in physical, financial and functional terms including service needs and objectives; allow sufficient time for project definition, design and documentation; involve potential users, maintainers and constructors in determining design; attempt to identify potential construction difficulties and make due allowance for them in determining the construction period. From the review, Ariet and Shuli (2015), the function of project planning is seen ideal and relevant in meeting the project needs and ensuring the contractor does the right work, however, they do not look at planning as a means of avoiding difficulties, associated with project performance. This is however vital for the different stakeholders and was explored in this current study.

In addition Hammad (2015) reveals that contract planning also determines and clearly conveys the project time and cost objectives and quality standards to be met, undertake robust project feasibility evaluation; select the procurement strategy best suited to their needs and identify a clear project implementation and procurement strategy. All these are fundamental in ensuring that the contract manager and other stakeholders pursue vibrant project stages with defined outcomes and timings which results into performance effectiveness. On the contrary, this may not be achieved when the planning is haphazardly done. This study sought to address the scope of project planning and how appropriate it was in ensuring project performance, basing on the WB funded projects under MoES in Uganda.

2.3.2 Contract Controls and Performance of Construction Projects

The rationale for control in project management stems from existence of many malpractices exposed in past corruption cases includes manipulation in sampling of materials for testing, substitution of test samples, falsification of test reports, and false or selective reporting of field tests, among others (Rahaman, 2012). Thus taking on project controls is one way of ascertaining that the above operations risk do not occur or are minimal to insignificant magnitude. While Rahaman (2012) notes that contract controls are necessary to avert malpractice, however does not assess how clients, consultants, user department and funders can avert this and the degree of effect on project performance, and yet it was vital for successful project performance.

Research findings (Loo et al. 2006), agree that to improve time and cost performance of the construction projects; the contracts manager must ensure, proper planning works, commitment leadership and management, effective communication through regular meetings, use of skilled workers, close project monitoring; Training and development of workers, focus on quality, cost and delivery of the project. It can be noted that studies cited have paid a deeper analysis on the aspect of contract management in terms of value addition and quality control, and their focus is on companies outside Uganda. This current study paid attention to the contract cost control drawing reference to UPPET/APL1 phase 2 project in Uganda.

From the perspective of Yakubu (2010), controls are seen as watchdog for projects in finances, time management and also in payments, however, Yakubu could not establish significance of effect of contract controls on project performance in Uganda in consideration of client, consultant, funder and user department' input, hence this study was timely and relevant. More so, Jha and Iyer (2006) emphasizes the aspect of

professionalism in contract work by ensuring adherence to quality in materials used specification and structure.

2.3.3 Contract Interim Monitoring & Evaluations and Performance of Construction Project

According Ballard & Howell (2011), Monitoring and Evaluation (M&E) is one of the core activities each manager should give consideration. Among the project characteristics that should be included in all contractual arrangements and which project participants should give attention is monitoring and control of a project during contract management. Project interim monitoring and evaluation is a paramount issue which can subsequently result into successful project performance. This study however focused on how monitoring and evaluation affects projects performance which is not well addressed in the study of Ballard & Howell's publication.

According to Ballard & Howell (2011), the long term effectiveness of the project especially when it is done phase by phase is based on the monitoring done. The essence with which the project controllers and implementers focus on the applicability of the different materials as and when they are used, determine how the long-term indicators can be realized and measured. Therefore, it is convenient to judge success of the project by whether the project management criteria than project criteria and this detail was examined in this current study.

2.4 Summary of the Literature Review

The concepts of contract management and project performance are not new phenomena and have existed since the early post World War I period. To date, the value of contracting and sourcing for expertise knowledge to handle these projects remain unavoidable. Just as the Parkinson theory affirms, time schedule and budget schedules, project managers

during contract formulations and implementation are vital, this review has based on this theory.

Drawing from the fact that, project performance can only be considered achieved when costs and resources translate into target outcomes, it is key that a project is evaluate don its outcomes. Project performance is the overall outcome or impact visible after the project goals and objectives have been put into consideration. The contract is presumed performed when works are executed as per guidelines, costs and schedules at hand, and the quality standards meet the expectations of all parties, otherwise the contract is instead suspended (Kwame, 2011). While this is the ideal expected, not all companies/ contractors achieve these goals and expectations, and as such some projects are under or not performed. The review has explored the extent to which this may arise, giving detail on how contract planning, controls, evaluations and monitoring aspects, have not been adhered to yielding to poor contract performance in some countries. This detail has however not been explored in the Ugandan case, and regarding UPPET/APL1-Phase 2 under MOES, specifically.

Attention has also been drawn to key indicators of effective construction projects performance. Information on project planning, project controls, evaluation and monitoring and how they affect construction projects performance have been expounded on. Nevertheless, few cases have been cited from Uganda in the review. To that effect the researcher was interested in conducting this study, complement the above information drawing experiences from the local Ugandan Scene. This prompted the researcher to address the influence of contract management on construction projects performance of UPPET/APL1-Phase 2 under MOES in Uganda.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the procedures which were used in the study. These include the research design, study population, sample size and selection, sampling techniques, data collection instruments validity and reliability of tools, procedure of data collection and data analysis of the data collected.

3.1 Research Design

The correlational research design was used in this study. This design enabled the researcher to analyze the influence of contract management on performance of construction projects. The study considered that contract management could be measured basing on how projects are planned, controlled, monitored and evaluated. A quantitative approach was used to analyze the influence of contract management on performance. Focus was on UPPET/APL1 phase 2 projects under MoES in Uganda.

3.2 Study Population

To every study, the population is a key component. Oso and Onen (2008) show that the study population is the total number of subjects of interest to the researcher. This study's population considered stakeholders involved in contract management and project performance of UPPET /APL1-PHASE 2 projects under MoES. The population was drawn from the clients, funder's representatives, consultants, and user departments as they existed for UPPET/APL1-PHASE 2 covering six (6) projects. In total, a population of 100 respondents were focused on consisting of 18 client representatives (MoES at National and District level and WB), 36 participants at consultant firm level (Architects, Engineers and Quantity Surveyors), four(4) representatives at the World Bank and 42 representatives at the User department (schools) where the projects were implemented. The 100

respondents was the overall number of key stakeholders that had an active to play in the UPPET/APL1-PHASE 2 project. This population was highly representative and offered the researcher an opportunity to explore and obtain detailed information about contract management and project performance done for MoES by various construction companies under the funding of WB.

3.3 Sampling design

3.3.1 Sample Size and selection

A sample of 80 respondents was selected for this study. This was arrived at by calculations basing on the formula.

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

Where: n = Sample Size

N = the total population of 100 respondents

e = the level of precision (e =5%)

Thus,

$$\begin{aligned} n &= \frac{100}{1+100(0.05)^2} \\ &= \frac{100}{1.25} \\ &= 80 \text{ respondents} \end{aligned}$$

This was distributed in Table 3.1 below.

Table 3.1: Sample Size and Composition

Category	Study Population	Sample Size selected	Sampling Technique
Client	18	14	Purposive
Consultant	36	29	purposive Simple random Snow balling
Funder's representative	4	3	purposive Simple random
User departments (Schools)	42	34	Purposive Simple random
Total	100	80	

3.3.2 Sampling Techniques and Procedures

Both random and non-random sampling techniques were used in the study. Purposive, snowball and simple random sampling techniques were adopted to select respondents. Purposive simple random sampling was used to select Consultants of the various UPPET/APL1-PHASE 2 projects at MoES. Purposive sampling was useful in selecting respondents with clear views which eased the process of data collection and ensuring representative sample.

Simple random sampling in particular was used to select respondents basing on their roles in the project. It provided all respondents a chance to participate. Simple random sampling provides each member in the selected population an equal probability of being selected (Amin, 2005). Simple random sampling focus on providing each of the units in the strata to have an equal chance of being selected (Sarantakos, 2005). Thus the use of simple random helped in minimizing the sample bias common in correlational studies.

Snowball sampling was also used to select technical team. Under Snowball, the researcher identified one key informant and sample was obtained by one respondent recommending the next potential respondents who offer good data (Mbabazi, 2008). Given that each project had its own specific Architect, Engineers and Quantity Surveyor, but all of whom were known to the Project Manager at the site, the contact person for each of the contracts was the Project manager. Thus researcher consulted the project manager for reference to the Architect, who further helped direct the researcher to the Engineer and Quantity Surveyors on the project for further information. Snowball was useful in the identification and contacting these technical team persons for each of the project as they could not be found at the project site by the time of the study.

On the other hand, Purposive sampling was used to choose subjects with the right views and opinions on the subject of study (Kombo & Tromp, 2010). Representatives from MoES at the National and District Education Office (DEO) level, and WB representatives for each project were purposively selected. Purposive sampling was used when there was need for contact persons whose opinions were key in the project (Sarantakos, 2005). The choice of the methods was useful for selecting a comprehensive distribution of respondents and comprehensive information on contract management and construction project performance at MoES, Uganda.

3.4 Data Collection Methods

Data was collected from primary sources and secondary data sources. Survey methods and questionnaire were used to collect primary data and documentary analysis for secondary data for this study.

3.4.1 Survey Questionnaire

A structured questionnaire was used to collect quantitative data. Copies of questionnaires were used for field data collection. After being briefed, the respondents were given a structured questionnaire to complete. As advised by Sarantakos (2005), the questionnaire had items derived from the study objectives and Likert scale responses. Only respondents with information on contract management and construction projects' performance in Uganda were considered.

3.4.2 Documentary review

Documentary methods appear in many forms but this study specifically addressed documents that are related with contracts and projects handled under WB by MoES in various schools. Documentary review is not only descriptive but has ability to provide hands-on factual information about the phenomena under study (Fawcett, 2000). The

researcher observed contract documents, performance sub-reports, and other relevant documents for more information about UPPET/APLI1-Phase 2 construction projects.

3.5 Data Collection Instruments

Questionnaires and documentary analysis were used to collect data.

3.5.1 Structured Questionnaires

The researcher, in consultation with the supervisors, designed a set of questionnaires for those respondents who would be found at the site of the project and for respondents who would be contacted in their offices. Questionnaires were addressed to all the respondents. Self-Administered Questionnaires were used in this study so as to attract a high response, avoid loss of questionnaires by respondents, and provide room for the researcher to save time and avoid hasty responses (Mugenda & Mugenda, 2005). This contributed to the accuracy of the data collected. The questionnaires consisted of close-ended items which were weighed on a 5-point Likert scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD). The questions were also scored as 5, 4, 3, 2 and 1 respectively from the point of strongly agree to strongly disagree for further analysis to be carried out. Close-ended questions allow quick responses and controlled expression of opinions (Amin, 2005). They had four (4) sections section 1 sought information on demographic data, and section 2-4, on study objectives. For all the items ranked on the Likert scale, the scale of 1-5 was on the basis for interpretation and analysis appropriate for the study as well as giving well thought out answers in line with guidelines given by Ahuja (2005).

3.5.2 Documentary Analysis Checklists

The researcher developed a guide for the documentary analysis which helped in categorizing the information gathered from related documents and archival records from MoES, the Site Records, and other Project management's desk (s). The documentary analysis guide sought statistics and other performance trends of the projects so as to generate information that was based on to complement primary findings from questionnaires and interviews. The documents that were looked at during the study included strategic plans, constitutions, site meeting minutes, project progress and annual reports from the selected projects.

3.6 Validity and Reliability of the Instruments

A pilot study was conducted by the researcher in which a pre-test of the instruments for data collection was conducted. The instruments were pre-tested on two (2) randomly selected 20 respondents, 10 from Eastern region and 10 from western region in area with UPPET/APL1-PHASE 2 project sites. These piloted areas were not part of the main study. On the basis of the pilot study, the validity and reliability of the instruments were tested.

3.6.1 Validity of Instruments

The study instruments were pre-tested for their face and content validity. Items in the questionnaire were interpreted and given to pilot study respondents for consistency and analysis. For face validity, the instruments were reviewed by the supervisors and experts who made comments on the tools. The questions found vague were eliminated or rephrased. Any ambiguities, misunderstanding and inadequacies found were also eliminated as advised by Amin, (2005). More so the words used in the instruments were made simple, clear and related to the research problem. The tools were given to the 20 pilot sample respondents and their responses entered into SPSS, Ver. 20 for the Content Validity Index (CVI). The CVI was calculated on the formula.

The inter judge validity was computed by:

$$CVI = \frac{\text{Number of items declared valid}}{\text{Total number of items}}$$

Total number of items 48,

Number items with errors 4

$$\begin{aligned} CVI &= \frac{48 - 4}{48} \\ &= \frac{44}{48} \\ &= 0.92 \end{aligned}$$

The validity of the questionnaire and interview items was computed at 0.92 an index above 0.7 as recommended to be valid (Amin, 2005). Attaining and using valid tools helped to provide accurate results dependable by readers and users of information from this study.

3.6.2 Reliability of the Instruments

Reliability of the tool is its ability to provide consistent answers even when used on various occasions and circumstances (Creswell, 2009). In order to establish the reliability of the instruments, a pretesting and a test-re-test procedure was carried out for a period of 2 weeks interval. The instruments were pre-tested in Mbale Secondary School (eastern) and Kibiito Secondary school (western). The results of the pre-testing exercise were entered into SPSS Ver.20, and tested for their reliability. Basing on the Cronbach reliability test scores as shown in table 3.2, tools were considered reliable giving an average value of 0.704, which was above 0.7 as recommended (Amin, 2005).

Table 3.2: Reliability Statistics

Cronbach's Alpha Values	0.67	0.72	0.67	0.74	0.68	0.73	0.69	0.74	0.81	0.62	0.72	0.66	
Number of items	4	4	4	4	4	4	4	4	4	4	4	4	
Average alpha Value													0.704

3.7 Data Collection Procedure

The researcher prepared research instruments, pre-test them and redesigned them for the study in consultations with the supervisor. With a duly prepared proposal and tools, the researcher asked for a letter of introduction to proceed to the field. The researcher considered a project in each of the six (6) benefitting schools (Mbale SS, Nkoma SS, Bukoli College, Kyenjojo SS, Kibito, SS and Kahinju SS) and ensuring that they were highly representative in terms of districts under study. The introduction letter was presented to all respondents in the study for their consent and approval to participate in the study. The researcher first obtained and administered tools to the respondents at offices and then visited project sites one at a time for a period of four (3) weeks.-each week for a project. Questionnaires as well as observation of different documents were undertaken at each project that was involved in the study. The collected data were assembled together, for processing and analysis into a report.

3.8 Data Analysis

3.8.1 Quantitative Data Analysis

The data obtained was entered into Statistical Package for Social Sciences (SPSS), version 20.0. This package helped to manage the data and to facilitate the analysis process. The study utilised all levels- Univariate, bivariate and multivariate levels of data analysis (Zikmund, 2010).

At Univariate level, data analysis was primarily done on all for nominal data (section A).

The variables considered were age, position held, sex, level of education and experience of

the respondent. A univariate analysis under SPSS generated frequency and percentages as tabulated in chapter 4 below. Univariate and more specifically descriptive statistics were obtained after running univariate analysis for Likert (1-5) scale responses on project cost budgeting, project scheduling, project scope, schedule control, quality control, the interim monitoring status, authorization of payments, appraisal reports, timeliness of the project, adherence to quality standards and cost performance. The output was interpreted basing on the mean and standard deviation (SD) scores to provide the central measures of opinions of respondents vary (Sarantakos, 2005).

At bivariate levels, correlations were computed to establish the relationship between the independent variable (IV) components and dependent variable (DV) components. Specifically correlations helped to establish the associations between variables and for hypotheses testing (Sarantakos, 2005). Hypothesis testing was done as noted below.

Hypothesis 1:

For hypothesis testing, a strict procedure was followed. A null (H_0) hypothesis and alternative (H_a) hypothesis were formulated. H_a : Contract planning has a significant influence on the performance of construction projects and H_0 : Contract planning has no significant influence on the performance of construction projects. Questions related to this hypothesis were entered into SPSS. Pearson rank correlation (r) was used to establish the relationship between contract planning and performance of construction projects on a scale ($-1 \leq r \leq 1$) to explain the magnitude of the relationship). The level of significance was set at 5%. The criterion to decide as to whether the statistics are considered significant was taken at $P < 0.05$. For the p-value less than 5%, null hypothesis was retained and the alternative hypothesis rejected.

Hypothesis 2:

For hypothesis testing, a strict procedure was followed. A null (H_0) hypothesis and alternative (H_a) hypothesis was formulated. H_a : Contract controls have a significant influence on performance of construction projects and H_0 : Contract controls have no significant influence on performance of construction projects.

Responses to questions related to this hypothesis were entered into SPSS. Pearson rank correlation (r) was used to establish the relationship between Contract controls and performance of construction projects on a scale ($-1 \leq r \leq 1$) to explain the magnitude of the relationship at 5% level of significance. The criterion to decide as to whether the statistics are considered significant were taken at $P < 0.05$. For the p-value less than 5%, the null hypothesis (H_0) was retained and the alternative hypothesis (H_a) rejected.

Hypothesis 3:

For hypothesis testing, a null (H_0) hypothesis and alternative (H_a) hypothesis were formulated. H_a : Contract monitoring and Evaluation influences construction project performance and H_0 : Contract monitoring and Evaluation do not influence construction project performance. Questions related to this hypothesis were entered into SPSS. Pearson rank correlation (r) was used to establish the relationship between Contract monitoring and Evaluation and project performance on a scale ($-1 \leq r \leq 1$) to explain the magnitude of the relationship. The level of significance was set at 5%. The criterion to decide as to whether the statistics are considered significant was taken at $P < 0.05$. For the p-value is less than 5%, the null hypothesis (H_0) was retained and the alternative hypothesis (H_a) rejected.

Under the multivariate analysis, the researcher formulated a simple model to predict the project performance levels attributed by contract management's sub variables (contract

planning, contract monitoring and evaluation and contract controls). The data were entered into SPSS. The beta (β) coefficients for each independent sub-variable generated from the model were used to describe the extent by which contract management attributes of (planning, monitoring and evaluation and controls) predict level of project performance.

The regression model used was:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Y = Performance of construction projects

α = is the constant

$\beta_1, \beta_2, \beta_3$ – Beta coefficients indicating rate of change of firm performance as a result of contract planning, contract monitoring and evaluation, and contract controls. X_1 – contract planning

X_2 – contract monitoring and evaluation, X_3 – contract controls and ϵ - Error term

Significant levels were measured at 95% confidence level with significant levels at $p < 0.05$. The beta (β) values were used to answer the model. All the three (3) predictors of contract management were explained by the Adjusted R^2 . It was expressed as a percentage to show the extent by which Contract management (planning, contract monitoring and evaluation, and contract controls), predict the overall project performance. The Adjusted R square was 40.9%. Adoption of these inferential and descriptive statistics for data analysis helped in classifying and establishing the magnitude and significance of the variable relationships (Betts *et al.*, 2001) which helped to test the hypotheses and generate the impact of contract management on the construction performance of construction projects for UPPET/APL1- PHASE 2-MoES in Uganda.

3.9 Ethical Considerations

In this study, ethical considerations were upheld by ensuring high level of confidentiality, seeking for informed respondents consent, and privacy.

Confidentiality of the respondents' views and opinions were held. The researcher ensured that all responses provided either recording or filled questionnaires were kept under key and lock before, during and after analysis (Haverkamp, 2005). During data collection, access to documents was done with formal approval by the responsible official. More so, data entries were entered basing on codes and themes. High levels of confidentiality were adhered to by treating respondents' views anonymous. The names, particulars and other details that would expose identification of respondents were not sought for.

Consent of the respondents was considered ideal and participants were made to understand the study and give their informed consent to participate in the study. Participants had complete understanding of the purpose, methods, what was demanded of them and no risk involved when they participate used in the study (Drew & Hardman, 2007). Only respondents who gave their informed consent voluntarily were involved in the study.

Privacy is the right of the respondents' personality to be separated from the study. The researcher attached high value to respondents' individual privacy (American Educational Research Association (2005). Any sensitive data attached to key offices was paraphrased and presented anonymously in the study findings. Questionnaires and interview interactions were held upon booking appointments to avoid interfering in the private office / work life of the respondents.

Throughout literature search, review and citation in the study, researcher ensured acknowledgement to authors of different texts, theories and essays. More so, most of the information read were paraphrased to relate it to the current study as well as avoid any traces of plagiarism.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF THE RESULTS

4.0 Introduction

This chapter presents the study findings on analyzing contract management and construction projects performance in Uganda. Focus was on UPPET/APLI1 Phase 2 projects funded by World Bank for Ministry of Education and Sports (MOES) in Uganda. The study findings mainly analyzed the influence of contract planning, contract controls, and contract monitoring and evaluation on UPPET/APLI1- PHASE 2-MoES project performance in Uganda.

4.1 Demographic Data of Respondents

4.1.1 Distribution of respondents

A total of 80 respondents participated in the study. These were different stakeholders in the UPPET/APLI1-phase 2 project and were distributed as shown in Table 4.1.

Table 4.1: Distribution of respondents

Attribute	Frequency	Percent	Valid Percent	Cumulative Percent
<i>Clients</i>	14	17.5		
District Technical Team	6	42.9	42.9	42.9
District Administration	4	28.6	28.6	71.4
Engineering Assistant	2	14.3	14.3	85.7
Procurement Unit	2	14.3	14.3	100.0
<i>Users</i>	34	42.5		
Management Committee Member	22	64.7	64.7	64.7
Chair School Management	6	17.6	17.6	82.4
School Procurement Staff	6	17.6	17.6	100.0
<i>Funders</i>	3	3.75		
Procurement Specialist	1	33.3	33.3	33.3
Finance Specialist	1	33.3	33.3	66.7
Construction Specialist	1	33.3	33.3	100.0
<i>Consultants</i>	29	36.25		
Engineering consultants	23	79.3	79.3	79.3
Clerk of works	6	20.7	20.7	100.0
n=80				

Results show that respondents were from clients 14 (17.5%), users 34 (42.5%), funders were 3 (3.75%) and consultants were 29 (36.25%) in study. This distribution was representative in terms of stakeholders involved in UPPET/UPL1-Phase 2 project. Specifically, each category of respondents attracted different participants as further described.

Regarding, clients who were mainly officials at District level, 6 (42.9%) of the respondents were on District technical team, 4(28.6%) were District administrators, 2(14.3%) were MOES Engineering assistants and 2(14.3%) from the procurement unit. More so, users dominated the study and these were at school/site level and these included 22 (64.7%) on construction management committee members, 6(17.6%) who were chairpersons of school management and 6(17.6%) were participants representing the school procurement staff. An equal number of respondents 1 (33.3%) were selected from the procurement, finance and construction specialists of the funders. On the aspect of consultants, 23(79.3%) were engineering consultants and 6(20.7%) were clerk of works.

4.1.2 Sex of respondents

The distributions of the respondents according to their distribution were as in Table 4.2.

Table 4.2: Sex of the respondents

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	53	66.2	66.2	66.2
Female	27	33.8	33.8	100.0
n=80				

Table 4.2 results show that 53(66.2%) of the respondents were males and 27 (33.8%) of the respondents were females. This implies that majority respondents were male, thus construction contract activities on this project right from users, clients, and consultants, male dominate. Nevertheless, for purposes of gender representativeness of information about contract management and performance of construction projects.

4.1.3 Level of Education of respondents

The distribution of respondents basing on education was as shown in Table 4.3.

Table 4.3: Level of Education

Education status	Frequency	Percent	Valid Percent	Cumulative Percent
Degree	58	72.5	72.5	72.5
Diploma	13	16.2	16.2	88.8
Higher diploma	5	6.2	6.2	95.0
Master's Degree	4	5.0	5.0	100.0

n=80

Table 4.3 results indicate that 58 (72.5%) of respondents had a bachelor's degree, 13(16.2%) respondents had diploma, 5(6.2%) had higher diploma, 4(5%) of the respondents had master's degree. This indicates that all the participants had high level of education which helped to inform the researcher in handling contract management and construction projects under the UPPET/APLI project.

4.1.4 Experience in Project/Construction work

Table 4.4: Duration spent dealing in project/construction activities

Years	Frequency	Percent	Valid Percent	Cumulative Percent
5-10 years	44	55.0	55.0	55.0
1-5 years	22	27.5	27.5	82.5
Over 10 years	14	17.5	17.5	100.0

n=80

Results in Table 4.4 show that majority 44(55.0%) of the respondents had experience of 5-10 years in project/construction work, 22(27.5%) had worked for 1-5 years and 14 (17.5%) of the over 10 years' experience in project/construction work. This showed that the participants were experienced in project and construction work, an implication that they gave detailed factual information.

4.2 Influence of contract planning on UPPET/APL1-PHASE 2-MoES construction projects performance in Uganda

Objective one sought to analyze influence of contract planning on UPPET/APL1- PHASE 2-MoES construction projects performance in Uganda. The aspect of planning was examined in regard to budgeting, scheduling and project scope, as presented below.

4.2.1 Project cost budgeting

Table 4.5: Project cost budgeting

Assertion statement (s)	N	Min	Max	Mean	Std. Deviation
Budgeting reduces material/input wastage	80	3.00	5.00	4.612	.53943
Budgeting ensures continuous project progress	80	3.00	5.00	4.575	.56870
The project's budgets were comprehensively and accurately prepared	80	2.00	5.00	3.575	1.42113
Total costs were provided for and financial resources available for the project funding whenever requested	80	1.00	5.00	2.300	.75305
Valid N (listwise)	80				

Table 4.5 results reveal that majority of the respondents strongly agreed (M=4.61) that budgeting reduces material/input wastages and they strongly agreed (M=4.58) that budgeting ensures continuous project progress. Further results indicate that majority respondents (M=3.58) agreed that the project's budget were comprehensively and accurately prepared, however, majority of the respondents disagreed (M=2.30) that the total costs were provided for and financial resources available for the project funding whenever requested. The findings show that with the exception of opinions raised on the aspect that projects budgets are comprehensive and accurately prepared standard deviation score (SD= 1.421), other opinions were consistent, shown by a SD scores below 1. This

implies that despite the fact that budgets were prepared, they were sometimes less detailed and non-comprehensive.

Evidence gathered on specific sites during a review of the UPPET monitoring Report (2014) also showed price escalations were not provided for in the budget. This was indicated to have affected the scope of works and also created a need to utilize some of the funds meant for phase 3 in this phase.

From the UPPET Audit Report (2015), it was further established that there was miss match of financial requirements, work scope and time schedules that forced WB to return project funds to IDA bank. For example on some schools, it was established that projects contracts were terminated and the client compensated by insurance companies while on other contracts whose scheduled time had expired the client was not able to be compensated.

4.2.2 Project Scheduling

Results regarding project planning through project scheduling was being done in relation to the performance of UPPET/UPL1- phase 2 project were as shown in Table 4.6.

Table 4.6: Project scheduling

Assertion statement (s)	Std.				
	N	Min	Max	Mean	Deviation
A robust project baseline schedule promotes timely completion of projects	79	2.00	5.00	4.62	.66610
Schedule covered all works from project start - end	80	1.00	5.00	3.75	1.3168
The project schedule was accurately and comprehensively prepared with a room for monitoring and controlling of the project progress	80	1.00	5.00	3.00	.95467
The project planned schedule was periodically updated to reflect the actual project work progress	80	1.00	5.00	2.40	.73948
Valid N (listwise)	79				

Table 4.6 results indicate that majority of respondents strongly agreed (M=4.62) that a robust project baseline schedule promotes timely completion of projects. A mean of (M=3.75) was obtained regarding the view that the contracts done covered all works from project start to end. However, majority of respondents were unsure (M=3.00) whether the project schedule was accurately and comprehensively prepared with a room for monitoring and controlling of the project progress. Majority of the respondents disagreed (M=2.40) that the project planned schedule was periodically updated to reflect the actual project work progress. Results also showed that apart from the perception that the schedule covered all works from the start to the end which attracted a standard deviation score above 1 (SD=1.317), all other statements attracted consistent opinions as described by their means.

A documentary review of the UPPET Report (2014) and UPPET Audit Report (2015) also complemented the findings in Table 4.6. A review of the UPPET Report (2014) monitoring report however indicated delayed start due to unanticipated activities involving

training of staff on procurement procedures and construction management committee. From the UPPEP Audit Report (2015), it was established that implementation plan of civil works and procurement process in line with WB guideline were not incorporated at contract planning that further resulted to delayed start and late completion.

4.2.3 Project scope

Table 4.7: Project Scope

Assertion statement (s)	N	Min	Max	Mean	Std. Deviation
The quality standards and material specifications defined in the project scope are manageable and available on market	80	2.00	5.00	4.187	.65784
Project requirements were properly assessed	80	1.00	5.00	3.700	1.4267
Project scope was sufficiently defined in designs and documentation.	80	2.00	5.00	3.637	1.1501
Costs to meet the entire project scope were all provided for	80	1.00	5.00	2.800	1.32550
Valid N (listwise)	80				

Table 4.7 results show that majority of the respondents agreed (M=4.19) the quality standards and material specifications defined in the project scope are manageable and available on market and they agreed that (M=3.70) that the project requirements were properly assessed. Results further indicate that majority of respondents agreed (M=3.64) that the project scope was sufficiently defined in designs and documentation. However, majority of respondents were unsure (M=2.80) that the costs to meet the entire project scope were all provided for. The aspect of scope attracted a high level of inconsistency (with SD above 1) except for the assertion statement that the scope focused on quality standard and material specifications (SD=.65784).

A review of the MoEFD monitoring Report (2017), showed lack of coordination between the MOES and implementing schools on project design and technical assessments on

contract scope. From the UPPET Report (2014), it was indicated continuous changes in site drawings influenced time and cost performance.

Hypothesis testing

Ha: Contract planning has a significant influence on performance of construction projects

Table 4.8: Influence of contract planning on performance of construction projects

		TotPCB	TotPSC	TotPSCO	TotSC	TotQC	TotCC	TotIMER	TotAOP	TotPARS	TotPPT	TotPPQS	TotPPCOP
TotPCB	Pearson Correlation	1	.754**	.841**	.211	.242*	...	.501**	.554**	.333**	.538**	.212	.175
	Sig. (2-tailed)		.000	.000	.060	.031	.000	.000	.000	.003	.000	.058	.121
	N	80	79	80	80	80	80	80	80	80	80	80	80
TotPSC	Pearson Correlation	.754**	1	.878**	.170	...	...	.612**	.570**	.401**	.626**	.213	.326**
	Sig. (2-tailed)	.000		.000	.134	.000	.000	.000	.000	.000	.000	.060	.003
	N	79	79	79	79	79	79	79	79	79	79	79	79
TotPSCO	Pearson Correlation	.841**	.878**	1	.095	...	...	.547**	.568**	.407**	.657**	.134	.168
	Sig. (2-tailed)	.000	.000		.402	.006	.000	.000	.000	.000	.000	.235	.137
	N	80	79	80	80	80	80	80	80	80	80	80	80

** Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at 0.05 level (2-tailed)

The study findings analyzed the influence of contract planning attributes of project cost budgeting, PCB, project scheduling PSC and project scope PSCO) on construction projects performance. Study findings showed a significant influence ($p.000 < .005$) of PCB on project performance, a significant influence of PSC on performance of construction projects ($p.000 < 0.05$), and a significant relationship between PSCO on performance of construction projects ($p.000 < 0.05$). Generally, all attributes of contract planning significantly influenced the performance of construction projects, and therefore, the hypothesis: Contract planning has a significant influence on performance of construction projects was **accepted**

4.3 Influence of contract controls on UPPET/APL1-PHASE 2-MoES construction projects performance in Uganda

Objective two was to determine the influence of contract controls on UPPET/APL1-PHASE 2-MoES construction projects performance in Uganda. In response to questionnaires and documentary review, the following results were obtained.

4.3.1 Schedule control

Study findings on schedule control as an aspect of contract controls aspects and performance of construction projects of UPPET/APLI-phase 2 were as shown in Table 4.9.

Table 4.9: Schedule control

Assertion statement (s)	N	Min	Max	Mean	Std. Deviation
Helps to monitor the project progress and keep the project on the right track	80	3.00	5.00	4.650	.50566
Helps in motivating project team and giving clear direction of work	80	3.00	5.00	4.450	.57147
Ensures proper records and clear communications to all parties to the project	80	1.00	5.00	4.400	.73948
Directs the project team on financial resources utilization	80	3.00	5.00	4.262	.52153
Valid N (listwise)	80				

Table 4.9 shows that majority of the respondents strongly agreed (M=4.65) that schedule control helps to monitor the project progress and keep the project on the right track and they strongly agreed (M=4.45) that schedule control helps in motivating project team and giving clear direction of work. Results further indicate that majority of the respondents agreed (M=4.40) that schedule control ensures proper records and clear communication to all parties to the project and majority respondents agreed (M=4.26) that schedule control directs the project team on financial resources utilization. Results indicate the responses that all the opinions and views regarding project schedule control were consistent (SD<1),

an indication that schedule control was one of the key activities given due attention in construction project management.

4.3.2 Quality control

Table 4.10: Quality control

Assertion statement (s)	N	Min	Max	Mean	Std. Deviation
Quality control helps project managers to attain customer expectations	80	2.00	5.00	4.625	.62389
Regular quality checks minimize project defects and errors in the project	80	2.00	5.00	4.550	.74460
Quality control helps in ensuring compliance to specifications for the works being done on the project	80	2.00	5.00	4.487	.63632
Materials laboratory test were periodically done on site	80	1.00	5.00	2.512	1.09074
Valid N (listwise)	80				

Table 4.10 shows that majority of the respondents strongly agreed (M=4.62) that quality control helps project managers to attain customer expectations in the due course of project performance, respondents strongly agreed (M=4.55) that regular quality checks minimizes project defects and errors in the project. Table 4.10 further indicate that majority of the respondents strongly agreed (M=4.49) that Quality control helps in ensuring compliance to specifications for the works being done on the project. Most respondents were in agreement (means above 4.00) with exception that material laboratory tests for the project were not periodically done as reported on the site. , although this attracted a high level of inconsistency (SD= 1.09074).

4.3.3 Cost controls

Table 4.11: Cost controls

Assertion statement (s)	N	Min	Max	Mean	Std. Deviation
Project documentation reduces conflicts and disagreements between parties on the project	80	3.00	5.00	4.600	.54191
Cost control ensures proper invoicing, timely payments and avoids disputes	80	1.00	5.00	4.600	.73948
Coordinated communication system facilitates cost management on a project	80	3.00	5.00	4.587	.54410
Cash flow management prevents possible financial losses through fraud and irregularities in payments	80	3.00	5.00	4.525	.55060
Valid N (listwise)	80				

Table 4.11 Indicates that majority of the respondents strongly agreed (M=4.60) that project documentation reduces conflicts and disagreements between parties on the project and they further strongly agreed (M=4.60) that cost control ensures proper invoicing, timely payments and avoids disputes. Table 4.11 further indicate that majority of the respondents strongly agreed (M=4.59) that coordinated communication system facilitates cost management on a project and respondents strongly agreed (M=4.53) that cash flow management prevents possible financial losses through fraud and irregularities in payments. Generally, the results indicate that respondents consistently agreed with the statements provided in regard to project controls and project performance shown by means above 4.00 and SD below 1 score. The audit report, (UPPET, 2015) however showed laxity in cost control and expenditures as displayed by payments on unplanned activities, no proper payment documentation and contractual procedures. Additionally, UPPET (2014) monitoring report further showed limited contract controls as evidenced by approved substandard works, missing facilities toilet and kitchen facilities in teachers' houses.

Hypothesis testing

Ha: Contract controls have a significant influence on performance of construction projects

Table 4.12: Influence of contract controls on performance of construction projects

Correlations

		TotPCB	TotPSC	TotPSCO	TotSC	TotQC	TotCC	TotEMER	TotAOP	TotPARS	TotPPT	TotPPQS	TotPPCOP
TotSC	Pearson Correlation	.211	.170	.095	1	-.285*	...**	.261*	.012	.422**	-.097	-.233*	.325**
	Sig. (2-tailed)	.060	.134	.402		.010	.000	.019	.919	.000	.393	.037	.003
	N	80	79	80	80	80	80	80	80	80	80	80	80
TotQC	Pearson Correlation	.242*	.383**	.307**	-.2E-1*	1	.222*	.400**	.477**	.269*	.050	.003	-.018
	Sig. (2-tailed)	.031	.000	.006	.010		.048	.000	.000	.016	.659	.979	.873
	N	80	79	80	80	80	80	80	80	80	80	80	80
TotCC	Pearson Correlation	.738**	.567**	.653**	...**	.222*	1	.589**	.501**	.472**	.211	-.118	.143
	Sig. (2-tailed)	.000	.000	.000	.000	.048		.000	.000	.000	.060	.299	.206
	N	80	79	80	80	80	80	80	80	80	80	80	80

** Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at 0.05 level (2-tailed)

Contract controls were examined basing on schedule control (SC), quality control (QC) and Cost control (CC) in relation to project performance. Results show that there was no statistical significant influence of SC on performance of construction Projects ($p.393 > 0.05$), QC on Performance of construction projects ($p.659 > 0.05$) and CC on Performance of construction projects ($p.060 > 0.05$). Generally, there was no statistical significant influence of contract controls on performance of construction projects of UPJET/APL1-PHASE 2-MoES project. Hence the alternative hypothesis that Contract controls have a significant influence on performance of construction projects was **rejected**.

4.4 Influence of contract monitoring and evaluation on UPPET/APL1- PHASE 2-MoES performance of construction projects in Uganda

Objective three focused on establishing the influence of contract monitoring and evaluation on UPPET/APL1-PHASE 2-MoES construction projects performance in Uganda as its third objective. Findings on this objective are presented below.

4.4.1 Interim Monitoring and Evaluation Reports

One of the ways of contract monitoring was through interim monitoring and evaluation reports. Findings on this attribute of contract monitoring and evaluation under UPPET/APLI were as shown in Table 4.13.

Table 4.13: Interim monitoring and evaluation report status

Assertion statement (s)	Std.				
	N	Min	Max	Mean	Deviation
IMER saves contractors of costs and wastages due to rework resulting from delayed issuing of work instructions by client	80	3.00	5.00	4.675	.52229
IMER provides room for all stakeholders to be aware of levels of compliance to specifications	80	3.00	5.00	4.650	.53011
IMER communicates the actual progress against planned progress of the project	80	3.00	5.00	4.462	.54988
Project site meetings were held and project progress reports produced periodically during implementation	80	1.00	5.00	2.925	1.07650
Valid N (listwise)	80				

Table 4.13 results indicate majority of the respondents strongly agreed (M=4.68) that IMER saves contractors of costs and wastages due to rework resulting from delayed issuing of work instructions by client and they further strongly agreed (M=4.65) that IMER provides room for all stakeholders to be aware of levels of compliance to specifications. Results further indicate that majority of respondents strongly agreed (M=4.46) that IMER communicates the actual progress against planned progress of the project. However, majority of the respondents were unsure (M=2.93) whether project site

meetings were held and project progress reports produced periodically during implementation. Results generally show that majority of the respondents except for the fact that project site meetings were held and project progress reports produced periodically during implementation (M= 2.925, SD=1.0765), gave strong and consistent agreement to the assertion statements provided on interim monitoring and evaluation report status.

UPPET (2014) monitoring reports indicated there was limited monitoring of works by the MOES supervising team and the contract management team.

4.4.2 Authorization of Payments

Table 4.14: Authorization of payments

Assertion statement (s)	N	Min	Max	Mean	Std. Deviation
Delayed payments increases project costs, time and use of cheap substandard materials	80	1.00	5.00	4.675	.75933
Payments were authorized based on actual work done	80	1.00	5.00	3.612	.84933
Payment process ensured compliance to specified payment terms under the conditions of contract	80	1.00	5.00	3.100	.97565
Authorized payments were honored within the contract defined times	80	1.00	5.00	2.712	1.06965
Valid N (listwise)	80				

Table 4.14 indicate that majority of the respondents strongly agree (M=4.68) that delayed payments increases project costs, time and use of cheap substandard materials and majority respondents agreed (M=3.61) that payments were authorized based on actual work done. Results further reveal that majority of the respondents were unsure (M=3.10) whether payment process ensured compliance to specified payment terms under the conditions of contract and majority of respondents were also unsure (M=2.71) whether authorized payments were honored within the contract defined times. Results generally shows that to a great extent, most respondents only agreed to the view that delayed

payments increases project costs, time and use of cheap substandard materials and most respondents' opinions were not consistent (SD= 1.06965) in regard to authorized payments being honored with in defined contract times.

According to UPPET Report (2014), it was viewed that some payments were made without certificates, advance payment guarantees and deviations between amounts certified by consultants and that paid by the schools. Additionally, MOFPED (2017) performance report showed in some schools, fewer funds were disbursed compared to what was requisitioned.

4.4.3 Project Appraisal Reports

Table 4.15: Project appraisal reports

Assertion statement (s)	N	Min	Max	Mean	Std. Deviation
PARS check the level of work done against the costs incurred	80	2.00	5.00	4.675	.63195
PARS helps in avoiding conflicts between the team on the project	80	4.00	5.00	4.587	.49539
PARS help to communicate the actual works done against planned works	80	2.00	5.00	4.537	.63533
PARS help to advise on necessary revisions to be made on the project	80	3.00	5.00	4.437	.57023
Valid N (listwise)	80				

Table 4.15 results indicate that majority of the respondents strongly agree (M=4.68) that PARS check the level of work done against the cost incurred and they also strongly agreed (M=4.59) that PARS helps in avoiding conflicts between the team on the project. Majority of respondents further strongly agreed (M=4.54) that PARS help to communicate the actual works done against planned works and they agreed (M=4.44) that PARS help to advise on necessary revisions to be made on the project. Results generally show that

respondents were consistent in strongly agreeing to different views that Project appraisal reports (PARs) are key on construction projects performance.

Hypothesis testing

Ha: Contract monitoring and Evaluation influences performance of construction projects

Table 4.16: Influence of contract monitoring and evaluation on performance of construction projects

Correlations		TotPCB	TotPSC	TotPSCO	TotSC	TotQC	TotCC	TotIMER	TotAOP	TotPARS	TotPPT	TotPPQS	TotPPCOP
TotIMER	Pearson Correlation	.501**	.612**	.547**	.261*	...	...	1	.613**	.407**	.398**	.082	.498**
	Sig. (2-tailed)	.000	.000	.000	.019	.000	.000		.000	.000	.000	.472	.000
	N	80	79	80	80	80	80	80	80	80	80	80	80
TotAOP	Pearson Correlation	.554**	.570**	.568**	.012	...	...	.613**	1	.237*	.466**	.219	.297**
	Sig. (2-tailed)	.000	.000	.000	.919	.000	.000	.000		.035	.000	.051	.007
	N	80	79	80	80	80	80	80	80	80	80	80	80
TotPARS	Pearson Correlation	.333**	.401**	.407**	...	.269*	...	.407**	.237*	1	.039	-.275*	.036
	Sig. (2-tailed)	.003	.000	.000	.000	.016	.000	.000	.035		.731	.014	.751
	N	80	79	80	80	80	80	80	80	80	80	80	80

* Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at 0.05 level (2-tailed)

Results revealed that there was a statistical significant influence of IMER on Project Performance ($p.000 < .05$) and AOP on Project Performance ($p.000 < 0.05$). However, there was no statistical significant influence ($p.731 > .05$) of PARS on Project Performance. This generally shows that monitoring and evaluation attributes had a significant influence on performance of construction projects. Thus hypothesis: Contract monitoring and Evaluation influences performance of construction project was **accepted**.

4.5 Results on the level of Construction Project Performance

The study further examined the aspect of construction projects performance basing on dimensions of timeliness, adherence to quality standards and cost performance.

4.5.1 Timeliness of the Project Works

Table 4.17: Timeliness of the project works

Assertion statement (s)	Std.				
	N	Min	Max	Mean	Deviation
Time extension of works was granted on UPPET/APLI-PHASE 2 project at this site	80	1.00	5.00	3.875	.68205
The UPPET/APLI-PHASE 2 project work were executed without breaking	80	1.00	5.00	2.962	1.11881
The UPPET/APLI-PHASE 2 project works were completed within the extended time	80	1.00	4.00	2.275	.77908
UPPET/APLI-PHASE 2 project at this site was completed on planned contract time	80	1.00	4.00	1.750	.70262
Valid N (listwise)	80				

Table 4.17 results show that majority of the respondents agreed (M=3.88) that time extension of works was granted on UPPET/APLI-PHASE 2 project at this site. However, majority of the respondents were unsure (M= 2.96) that the UPPET/APLI-PHASE 2 project work were executed without breaking. Majority of the respondents disagreed (M=2.28) that UPPET/APLI-PHASE 2 project works were completed within the extended time and majority of the respondents also disagreed (M=1.75) that UPPET/APLI-PHASE 2 project at this site was completed on planned contract time. Generally, the study respondents showed that to a great extent the respondents consistently revealed that the projects were untimely (exception of assertion that the project were presented without breaking, SD= 1.11881) as shown by mean scores (below 4.00) point of agreement. This was also displayed in the audit report (UPPET, 2015) where time was extended by four months to allow clearance of payments by WB but project closed out before processing of

funds. Additionally, UPPET (2014) showed some contracts expired before works completion which also indicated low time performance.

4.5.2 Adherence to Quality Standards

Table 4.18: Adherence to quality standards

Assertion statement (s)	Std.				
	N	Min	Max	Mean	Deviation
There was some rejection of materials and works during the UPPET/APLI-PHASE 2 project at this site	80	2.00	5.00	3.700	.62440
All the specifications and standards set for UPPET /APLI-PHASE 2 project at this site were adhered to	80	1.00	5.00	2.987	.89292
There was a high level of material substitutions under UPPET/APLI-PHASE 2 project at this project	80	1.00	5.00	2.437	.85453
The entire scope of works on UPPET/APLI-PHASE 2 project at this site was fully executed to specified standards	80	1.00	5.00	2.125	.70036
Valid N (listwise)	80				

Table 4.18 results indicate that majority of the respondents agreed (M=3.70) that there was some rejection of materials and works during the UPPET/APLI-PHASE 2 project at the site, though they were unsure (M=2.99) whether all the specifications and standards set for the UPPET/APLI-PHASE 2 project at this site were adhered to. Majority of the respondents disagreed (M=2.44) that there was a high level of material substitutions under UPPET/APLI-PHASE 2 project at this project and majority of the respondents disagreed (M=2.13) that there was a high level of material substitutions under UPPET/APLI-PHASE 2 project at this project. Table 4.18 further shows that majority of the respondents disagreed (M=2.13) that the entire scope of works on UPPET/APLI-PHASE 2 project at this site was fully executed to specified standards. The results show a consistent low level of agreement to statements given. Thus an indication that a number of UPPET/APLI phase

2 projects were not to the expected quality standards. Also UPPET (2014) monitoring report showed similar results that some works were produced below the required standard and indication of low quality performance.

4.5.3 Cost performance

Table 4.19: Cost performance

Assertion statement (s)	N	Min	Max	Mean	Std. Deviation
There were no Project Price adjustments in the UPPET/APLI-PHASE project at this site	80	2.00	5.00	4.412	.68794
Project Variations that occurred in the UPPET/APLI-PHASE 2 increased the overall costs of the project on this site	80	2.00	5.00	4.200	.60379
Costs allocated for the project were not enough leaving uncompleted works in the project scope of works	80	2.00	5.00	3.937	1.07142
Cost Variation claims presented to the client UPPET/APLI-PHASE project at this site were approved and paid on time	80	1.00	5.00	1.925	.79197
Valid N (listwise)	80				

Table 4.19 results indicate that majority of the respondents agreed (M=4.41) that there were no project price adjustments in UPPET/APLI-PHASE project at the site and they agreed (M=4.20) that the project variations that occurred in the UPPET/APLI-PHASE 2 increased the overall costs of the project on the site. Results further indicate that majority respondents agreed (M=4.20) that costs allocated for the project were not enough leaving uncompleted works in the project scope of works. However, majority of the respondents disagreed (M=1.93) that cost variation claims presented to the client UPPET/APLI-PHASE project at site were approved and paid on time. With the exception of the view that costs allocated for the project were not enough leaving uncompleted works in the

project scope of works (SD= 1.07142), all other opinions were consistent to the assertions provided. A review on UPPET (2014), revealed that there was an increase in unit prices that forced an encroachment of phase 3 funding.

To establish the overall relationship between contract management (independent variable) and performance of construction projects (dependent variable), a multiple regression was computed as shown in Table 4.20

Table 4.20: Regression analysis for relationship between contract management and construction projects performance

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.	Adj. R ²
	B	Std. Error	Beta			
l(Constant)	11.330	3.570		3.174	.002	.409
TotPCB	-.016	.104	-.031	-1.579	.875	
TotPSC	.177	.115	.330	1.536	.129	
TotPSCO	3.338	.100	.000	.000	9.997	
TotSC	.280	.119	.316	2.347	.022	
TotQC	-.214	.129	-.224	-1.667	.100	
TotCC	-.297	.139	-.373	-2.135	.036	
TotIMER	.462	.105	.608	4.396	.000	
TotAOP	.119	.083	.190	1.438	.155	
TotPARS	-.212	.119	-.211	-1.782	.079	
TotPPT	-.222	.125	-.273	-1.773	.081	
TotPPQS	.158	.098	.179	1.607	.113	

a. Dependent Variable: PERFORMANCE

The results of the regression indicated that three predictors explained 40.9% of the variance. The p-value in Table 4.20 for each predictor showed that SC, CC, IMER, contribute to the model (p>0.022; p>0.036; p>0.000), but PCB, PSC, PSCO, QC, AOP, PARS, PPT, PPQS do not. The adjusted R² of the model is 0.409, meaning that contract

management explains 40.9 % of the variance in the construction projects performance undertaken under the UPPET/APL1-Phase 2 project at MoES in Uganda. This was evident mainly in schedule Control, Cost Controls, Interim monitoring and evaluation reports made in regard to performance of construction projects.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a detailed summary of the study findings. The study focused on the contract management and construction projects performance in Uganda. The study utilized quantitative approaches to explore the study variables. A correlation approach was used, and findings were presented using descriptive and inferential statistics, and further summarized below.

5.1 Summary of the Study Findings

Contract management and construction projects performance in Uganda remain a key area of interest not only for stakeholders, but also to the public. This study focused on analyzing the influence of contract planning, contract controls, and contract monitoring and evaluation on UPPET/APL1-Phase2-MoES project performance in Uganda. Clients, users, funders and consultants were involved in the study. All key stakeholders who were informed about the Contract management and construction projects performance were involved. These were distributed in terms of sex, education and experience in projects work. This background helped to provide information key on UPPET/UPL1- Phase 2, as further described below.

5.1.1 Influence of Contract Planning on Performance of Construction Projects.

Planning is one of the key aspects in contract management. The results indicate that planning in construction activities was mainly undertaken through project cost budgeting, scheduling and scope. The study findings shows that respondents agreed that project planning through cost budgeting focused on inputs, ensures continuous projects progress, although they were not comprehensively and accurately prepared. Indeed, results showed

that as a result of challenges in planning, the total costs and financial resources were not always available as and whenever requested.

Regarding, project scheduling, results indicate that it was agreed to by most respondents that good project planning is one that promotes timely completion of the project, and ought to cover the project scheduled activities from start to end, accurately giving room for monitoring and controlling of the project progress. Most planned schedules were not periodically updated to reflect the actual work progress in the UPPET/UPL1 projects. Results hence assert that basing on quality standards and material specifications were manageable and available on market, although these requirements, designs, and documentations were not well properly assessed. However, the costs to meet the entire project scope were not well provided for as expected in the planning. Generally, contract planning was significantly related with project performance.

5.1.2 Influence of Contract Controls on Performance of Construction Projects

Contract controls in UPPET/APL1- PHASE 2-MoES project performance in Uganda were also explored in terms of schedule, quality and cost controls. Schedule controls according to results was well undertaken through monitoring the progress of the project, motivating team members, giving clear direction, proper project team on financial resources utilization and ensuring proper records and communication among parties in the project. In addition, Quality control helps managers to attain customer expectations and have regular checks for defects and errors in the project. Results further indicate that quality control in the projects was being based on to ensure compliance to the works specifications, although material laboratory tests were not regularly done on project sites which to some extent undermined the quality check and controls.

Results revealed that costs control was very key under UPPET/UPL1 project although this was mainly done at the funders, and this involved harmonizing documentation to reduce conflicts and disagreements, proper invoicing, timely payments and coordinated communication system in the bid to manage costs. The study revealed that cash flow management was also part of the controls as a means to reduce fraud and irregularities in payments. However, control was not regularly done at all levels, and thus controls did not significantly influence UPPET/APL1-PHASE 2-MoES project performance in Uganda.

5.1.3 Influence of Contract Monitoring and Evaluation on Performance of Construction Projects

Results of the study revealed that contract monitoring and evaluation was yet another aspect in contract management. In the study, contract monitoring and evaluation was examined in regard to interim monitoring and evaluation reports done, authorization of payments and appraisal reports. The interim and monitoring reports saves costs and wastages, provides room for all stakeholders to check compliance to specification, and communicates the actual progress against planned progress of the project. Authorization of payments was found to increase costs, ensure time and use cheap substandard materials, and actual work done. On the contrary, control ensured compliance to specific terms and conditions, although sometimes there were delays to honor authorized payments.

Furthermore, the study findings shows that project appraisal reports revealed the level of work done against the costs incurred, avoiding conflicts between the team on the project, communicate actual works done against planned works, and base on these reports to advise necessary revisions in the projects course of action. Generally, the project performance was examined basing on dimensions of timeliness, adherence to quality

standards and cost performance. In the study, it was found out that monitoring and evaluation attributes had a significant relationship with project performance.

A review of the relationship between contract management and construction projects' performance showed that there was a significance relationship between these variables. The contract management done explained 40.9% of the UPPET/APL1 phase 2 project in Uganda.

5.2 Discussion of the Study Findings

The funding and implementation of UPPET/UPL1 phase 2 project was a key area of examination in this correlational study. Efforts were drawn to contract management and construction project performance. The results were summarized, and discussed in relation to the study objectives.

5.2.1 Influence of Contract Planning on Performance of Construction Projects

The study findings regarding project planning through cost budgeting showed that majority of the respondents agreed with the assertion that project planning was based on budgets. Results indicate that under the UPPET/UPL1phase 2 project, planning mainly were envisaged on budgets of inputs to ensure continuous projects progress. Planning through proper budgeting was key for better project performance, and this was also revealed in Ariet and Shuli (2015) that the function of project planning is relevant in meeting the project needs and ensuring the contractor does the right work.

Additionally, the study findings show that project scheduling was one of the key contract planning aspects. Results showed that project planning as undertaken under UPPET/UPL1 phase 2 was not well done as scheduled from start to end, and as such some projects progress was stunted or rescheduled. For example on one of the construction projects, contracts were terminated as a result of delays (UPPET Audit

Report, 2015). This reflects what was cited by Gannet et al., (2007) that the most effective way of planning a project is to define its scope and schedule, and this could be a reason why some sections of the UPPET/UPL1 projects did not complete in time.

On the contrary, the findings showed that to properly plan for a project there is need to accurately update periodically the work in progress with actual planned schedules, give attention to the quality standards in terms of materials, and schedules. In most of the UPPET projects, the overall costs to meet the entire project scope were not well provided which could be associated with planning loopholes. The payment delays and short falls in projects agree with the earlier view of Kwame (2011) who cited that in a number of projects payment is delayed by the process and this can affect the project outcomes.

5.2.2 Influence of Contract Controls on Performance of Construction Projects

The study found out that contract controls are a key aspect in project performance. The study results in the first instance revealed that contract controls in terms of schedule controls facilitates smooth and routine performance of the contract. The UPPET project shows that through proper and well defined directions, team work and record keeping the schedules were being upheld, although not all stakeholders had better records. This was part of time control mechanism just as revealed in the Svetlana and Hodgson (2006). Additional, project control was evident in terms of how the project managers handled costs. Most of the projects had significant control function especially at the funders' point, who had an overseer management role. This finding agrees with Lock (2013) who revealed that successful project costs management is a responsibility of a project manager, and is key in determining the overall performance of the project.

The study findings also reveal that contract control was also implemented through quality control at material acquisition, specifications, and to a lesser extent in making laboratory

tests. In most UPPET/UPL1 phase 2, quality was ensured at the operation (client and user levels). On the contrary, material laboratory tests were not regularly done on project sites which to some extent undermined the quality check and controls. This short falls contravenes what was cited Jha and Iyer (2006) who reported that professional contract work is defined by quality in materials used specification and structure. When this quality is not achieved, a number of failures may arise, affecting the performance of the project.

5.2.3 Influence of Contract Monitoring and Evaluation on Performance of Construction Projects

Like it is for most activities that involve on-going activities or a series of processes, contract management has a strong bearing on how it is monitored and evaluated. A better and well monitored project is prone to succeed, and findings of this study revealed that one of the key factors that influenced performance of UPPET/APL1 project was monitoring and evaluation. Results further showed that one of ways of achieving this was through interim monitoring reports. Despite the inconsistencies in preparing these reports in some schools, interim monitoring influenced construction project performance, and this finding relate with Ballard & Howell (2011)'s assertion that monitoring and evaluation especially in-the course of the project is very key in influencing its performance, each manager should give consideration.

Contract monitoring and evaluation, according to this study was also explored in terms of authorization of payments. Through proper authorization of payment and time, the work-in progress moves faster allowing completion of the project in time. More so, getting supplies of materials as and when they are needed. Results showed that the UPPET project on contrary did not affect timely and regular payments, and this complements what

Kwame (2011) emphasized that timely projects payment can affect the project performance, just as it was for a number of projects under the UPPET project.

In addition, the study findings show that project appraisal reports were key monitoring tools and this largely depend on when, how and how often these reports are prepared. The study noted that project appraisal reports as part of monitoring and evaluation help to counter check the work done against the costs incurred, avoiding conflicts, communicate actual works done against planned works, and advise necessary revisions in the projects course of action. These aspects agree with what was cited by Hendrickson (2013) that project appraisal overlap throughout the entire implementation process of the project and are key to communicate and inform the different stakeholders in a project.

Generally findings revealed that the way a contract management (through planning, control, monitoring and evaluation is done is key in influencing its performance. Nearly 41 percent of the success or failure scope of the UPPET/APL1 phase 2 project in Uganda was attributed to the contract management and indication that the two are inter dependent. This finding agrees with Kivetz (2006) who affirmed in his study that contract management and construction projects are inter-dependent and the level of inter-dependency depend on how they handle their time, cost, and quality attributes at all construction processes in the project.

5.3 Conclusions

In light of the study findings, a number of conclusions were made;

5.3.1 Contract Planning and Performance of Construction Projects.

The study findings showed that there were inaccuracies on cost budgets, project time schedules were done although implementation was not based on schedule from start to end. It was also established that on some projects the defined scope exceeded the budget

in terms of cost and time. For example in some schools it was found out that works were not fully completed due to limited funds to match the required work scope. Thus the study findings indicated that contract planning through emphasis on accurate cost budgets, time schedule and properly defined work scope had significant influence on performance of construction projects in Uganda. Therefore it is concluded that contract planning has a significant influence on project performance.

5.3.2 Contract Control and Performance of construction projects.

The study findings showed that contract controls were key in influencing project performance in Uganda, although the level of influence was largely non significant. For example schedule, cost and quality controls were in place as asserted by respondents however laxity in implementation was observed and material lab tests were found not have been done periodically. Accordingly, it is concluded that contract controls has no significant influence on project performance.

5.3.3 Contract Monitoring and Evaluation and Performance of construction projects.

The study findings showed that Contract monitoring and evaluation on project performance in Uganda significantly influenced project performance. For example through proper authorization of payments ,emphasis on interim monitoring reports and stake holders periodic and site meetings with exception of project appraisal reports that did not give a significant influence. In view of the above, it is concluded that contract monitoring and evaluation has a significant influence on project performance.

5.4 Recommendations

From the study above, a number of recommendations emerged;

5.4.1 Contract Planning and Performance of Construction Projects

The MOES in collaboration with users, funders and consultants should always ensure proper Contract planning by emphasizing comprehensive cost budgeting, project scheduling and define the project scope sufficiently to ensure better performance of construction projects in Uganda.

5.4.2 Contract control and Performance of Construction Projects

Supervision is one of the ideal recommendations that should be emphasized especially at the District and school levels for MoES UPPET/UPLI projects later in the next phases. This is because out of less involvement in these stakeholders and limited stakeholders regular site meetings could be reasons to account why controls did not significantly influence performance of construction projects in Uganda.

5.4.3 Contract monitoring and evaluation and Performance of Construction Projects

The study recommended that contract monitoring and evaluation in terms of project appraisal and status reports should be improved since, it was found not giving significant results. This depicts weaknesses in the project appraisal reports an aspect that was affecting the performance of the project. Timely authorization and proper payment procedures should be encouraged for successful performance of construction projects.

5.5 Limitations of the study

The study was only delimited to the two regions of eastern and western Uganda, yet, UPPET/APLI projects cover the entire country, this was due to limited financing. More financing would have been ideal in facilitating a comprehensive coverage of the study. In addition, there was scarcity of reports apart from the UPPET Report (2014), UPPET

Report (2015) and MoFPED Report (2017), which limited the scope of literature regarding contract management performance of the UPPET/APLI project. Any future study should focus on possibly first undertaking a desktop research to complement this field-based survey.

5.6 Contributions of the Study

The findings of this study are able to inform different project stake holders on the possible influences and the extent to which contract management has on construction projects performance in Uganda. This study was able to generate facts on planning, control, monitoring and evaluation within contract management which adds on existing literature about these concepts. More so, as opposed to Parkinson' theory, it was appreciated that it is not contract controls that have a higher bearing of schedule and cost performance but also extensive planning and regular periodic monitoring and evaluation.

5.7 Areas for Further Research

This study has investigated on Contract and Performance of construction projects focusing on MoES. Future research should explore the following areas:

- (i) Contract management and project performance in Government Ministries in Uganda
- (ii) Contract management and project performance in the private sector in Uganda
- (iii) Contract management and project performance in NGOs in Uganda.

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APPENDICES

Appendix 1: Questionnaire for the study

Dear respondent,

I am Musiimenta Dickson, a student at UMI, pursuing a Masters Degree in Management Studies. As a requirement for the above award, I am conducting a study on the topic, **“Contract Management and Performance of Construction Projects in Uganda; A case of UPPET / APL1-Phase2, MOES in Uganda”**. As a person involved in the APLI-Phase2 on site, you are requested to participate in the study. You are assured that the information you provide will be treated with utmost confidentiality and used for academic purposes only.

Please tick an option which you think is the most appropriate to you.

Section A: Biodata information

1. School where the project was undertaken.....
2. Position held by respondent on site.....
3. Sex : Male Female
4. Level of Education
Craft I Craft II
Diploma Higher diploma
Degree Masters Degree
Any other (specify).....
5. For how long have you been involved in project/construction work?
Less than 1 year 1-5 years
5-10 years Over 10 years

For questions in sections B, C, D and E, please respond to the given statements by giving your level of agreement to the statement (s) given. Rating:

- 1= *Strongly Disagree (SD)* 2= *Disagree (D)* 3= *Not Sure (NS)*
 4= *Agree (A)* 5= *Strongly Agree (SA)*

Please tick an option showing the extent to which you agree or disagree with the statement.

Section B: The influence of Project Planning on Performance of Construction Projects.

S/N	Item	Responses rating				
		SD 1	D 2	NS 3	A 4	SA 5
	<i>Project cost budgeting (PCB)</i>					
1	The project's budgets were comprehensively and accurately prepared					
2	Total costs were provided for and financial resources available for the project funding whenever requested					
3	Budgeting ensures continuous project progress					
4	Budgeting reduces material/input wastage					
	<i>Project scheduling (PSC)</i>					
1	The schedule covered all works from project start to the end.					
2	The project schedule was accurately and comprehensively prepared with a room for monitoring and controlling of the project progress					
3	The project planned schedule was periodically updated to reflect the actual project work progress					
4	A robust project baseline schedule promotes timely completion of projects.					
	<i>Project scope (PSCO)</i>					
1	Project requirements were properly assessed					
2	Costs to meet the entire project scope were all provided for					
3	The quality standards and material specifications defined in the project scope are manageable and available on market					
4	Project scope was sufficiently defined in designs and documentation.					

Please tick an option showing the extent to which you agree or disagree with the statement.

Section C: The influence of Project Controls on Performance of Construction Projects

S/N	Item	Responses rating				
		SD 1	D 2	NS 3	A 4	SA 5
	<i>Schedule control (SC)</i>					
1	Helps to monitor the project progress and keep the project on the right track.					
2	Ensures proper records and clear communication to all parties to the project					
3	Directs the Project team on financial resources utilization					
4	Helps in motivating project team and giving clear direction of work					
	<i>Quality control (QC)</i>					
1	QC helps project managers to attain customer expectations					
2	QC helps in ensuring compliance to specifications for the works being done on the project					
3	Regular quality checks minimize project defects and errors in the project					
4	Materials laboratory test were periodically done on site					
	<i>Cost controls (CC)</i>					
1	Coordinated communication system facilitates cost management on a project					
2	Project documentation reduces conflicts and disagreements between parties on the project					
3	Cash flow management prevents possible financial losses through fraud and irregularities in payments					
4	Cost control ensures proper invoicing, timely payments and avoids disputes					

Please tick an option showing the extent to which you agree or disagree with the statement.

Section D: The influence of Project Monitoring and Evaluation on Performance of Construction Projects

S/N	Item	Responses rating				
		SD 1	D 2	NS 3	A 4	SA 5
	<i>Interim monitoring and evaluation reports (IMER)</i>					
1	IMER communicates the actual progress against planned progress of the project					
2	IMER provides room for all stake holders to be aware of levels of compliance to specifications					
3	IMER saves contractors of costs and wastages due to rework Resulting from delayed issuing of work instructions by client					
4	Project site meetings were held and project progress reports produced periodically during implementation					
	<i>Authorization of payments (AOP)</i>					
1	Payments were authorized based on actual work done.					
2	Authorized payments were honored within the contract defined times					
3	Payment process ensured compliance to specified payment terms under the conditions of contract					
4	Delayed payments increases project costs, time and use of cheap substandard materials					
	<i>Project appraisal reports (PARs)</i>					
1	PARs help to communicate the actual works done against planned works					
2	PARs check the level of work done against the costs incurred					
3	PARs help to advise on necessary revisions to be made on the project					
4	PARs helps in avoiding conflicts between the team on the project					

Please tick an option showing the extent to which you agree or disagree with the statement.

Section E: The level of Performance of Construction Projects

S/N	Item	Responses rating				
		SD 1	D 2	NS 3	A 4	SA 5
	<i>Timeliness</i>					
1	UPPET/APL1-PHASE 2 project at this site was completed on planned contract time.					
2	The UPPET/APL1-PHASE 2 project work were executed without breaking					
3	Time extension of works was granted on UPPET/APL1-PHASE 2 project at this site					
4	The UPPET/APL1-PHASE 2 project works were completed within the extended time.					
	<i>Adherence to quality standards</i>					
1	All the specifications and standards set for the UPPET/APL1-PHASE 2 project at this site were adhered to					
2	There was a high level of material substitutions under UPPET/APL1-PHASE 2 at this site					
3	There was some rejection of materials and works during the UPPET/APL1-PHASE 2 project at this site					
4	The entire scope of works on UPPET/APL1-PHASE 2 project at this site was fully executed to specified standards					
	<i>Cost performance</i>					
1	There were no Project Price adjustments in the UPPET/APL1-PHASE project at this site					
2	Cost Variation claims presented to the client UPPET/APL1-PHASE 2 Project on this site were approved and paid on time					
3	Project Variations that occurred in the UPPET/APL1-PHASE 2 increased the overall costs of the project on this site					
4	Costs allocated for the project were not enough leaving uncompleted works in the project scope of works					

Appendix 2: Documentary analysis checklists

In the course of conducting the study, the researcher read through the following documents

- Contract monitoring reports
- Audit reports
- Annual performance reports

Appendix 3: Letter of Introduction



UGANDA MANAGEMENT INSTITUTE

Telephones: 256-41-4259722 /4223748 /4346620
256-31-2265138 /39 /40
256-75-2259722
Telefax: 256-41-4259581 /314
E-mail: admin@umi.ac.ug

Plot 44-52, Jinja Road
P.O. Box 20131
Kampala, Uganda
Website: <http://www.umi.ac.ug>

Your Ref: G/35

Our Ref:

15/10/ 2018

TO WHOM IT MAY CONCERN

MASTERS IN MANAGEMENT STUDIES DEGREE RESEARCH

Mr. Dickson Musiimenta **Reg. Number 15/MMS/KLA/DAY/0015** is a student at Uganda Management Institute pursuing a Masters in Management Studies specializing in Procurement and Supply Chain Management.

In partial fulfillment for award of the Masters, he is conducting a research study titled "*Contract Management and Performance of Construction Projects in Uganda: A case of UPET/APLI Phase 2 MOES in Uganda*".

This communication therefore serves to formally request you to allow him access any information in your custody/organization, which is relevant to his research.

Thank you for your co-operation on this matter.

Yours Sincerely,

A handwritten signature in blue ink, followed by the date '15/10/18' written in blue ink.

Lugemoi Wilfred Bongomin
CHAIRPERSON RESEARCH COMMITTEE
SCHOOL OF BUSINESS AND MANAGEMENT