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**Dennis Kiprono Korir & Dr. Joseph Gichure**

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# Effects of Training Project Teams on Project Performance: A Case Study of Keiyo South Constituency Development Projects

<sup>\*1</sup>Dennis Kiprono Korir & <sup>2</sup>Dr. Joseph Gichure

<sup>1</sup>Msc Candidate, Jomo Kenyatta University of Agriculture and Technology, Kenya

<sup>2</sup>Lecturer, Jomo Kenyatta University of Agriculture and Technology, Kenya

\*E-mail of Corresponding Author: [denniskkiprono@gmail.com](mailto:denniskkiprono@gmail.com)

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## Abstract

The purpose of this study was to establish the effects of training project teams on performance; a survey of Keiyo south constituency Development projects. This is due to an observation the researcher has made on several projects exceeding its project duration hence causing cost overruns. The study was guided by the following specific objectives; to determine the effects of project teams training on cost management at Keiyo South Constituency Development Projects; to determine the effects of project teams training on risk management at Keiyo South Constituency Development Projects; to evaluate the effects of project teams training on project duration at Keiyo South Constituency Development Projects; to assess the effects of project teams training on project scope at Keiyo South Constituency Development Projects; and to assess the effects of project team training on project quality at Keiyo South Constituency Development Projects. This study employed a survey design in obtaining responses from the respondents. Survey research design was considered appropriate due to the area of study which is Keiyo South Constituency, having three administrative units namely; Metkei, Chepkorio and Soy Divisions. This study targeted a population of 120 projects run by the national government in Keiyo south constituency. In this study, the researcher assumed that the national government conducts training on all project teams; the researcher interviewed the team leaders on behalf of the entire team. To derive the study sample, the researcher used stratified random sampling using 50% of the population since 50% is ideal for survey research. The main tools used for data collection were questionnaires; interview schedules, secondary data and checklists. The use of

these tools was preferred because they were in a position of guiding the nature of data to be collected, time availability as well as the objectives of the study. The overall aim of data collection is to find out the respondents' views, opinions and perceptions, regarding the topic of study. The data was analyzed descriptively; collected information was examined, categorized and tabulated into various frequency tables and percentages to help in easier interpretation of data. The use of tables, percentages and charts was meant to ensure easy understanding of data and information collected because of its summarized nature and use of figures. The idea behind this type of research is to study frequencies, averages, and other statistical calculations. Although this research is highly accurate, it does not gather the causes behind a situation.

**Keywords:** *Training, Project duration, Cost Management, Risk Management, Project Scope, Performance*

### **1.1 Background of the Study**

The Kenyan Constituency Development Fund (CDF) is a fund that was designed to support constituency-level, grass-root development projects. It was aimed to achieve equitable distribution of development resources across regions and to control imbalances in regional development brought about by partisan politics (Zyl, 2015). In January 2013, the CDF Act 2003 (as amended in 2007) was amended and replaced with CDF Act 2013 so as to align it to the constitution of Kenya 2010. The rationale for enactment of the CDF Act 2013 was mainly aimed at ensuring that the law governing CDF is aligned to the Constitution of Kenya 2010, specifically in compliance with the principles of transparency and accountability, separation of powers; and participation of the people (GoK, 2015). The new law was also aimed at aligning the operations of the Fund to the new devolved government structure. Several changes to the CDF Act 2007 were made putting in place a new CDF act of 2013. Some of the major changes include the mandatory role of Project Management Committees in Project implementation, the responsibility of submitting project proposal to the board was given to the Chairman of CDFC as opposed to the area MP as was the case before (GoK, 2015).

During the execution phase, team members engage in actual work and team related activities in order to advance and successfully complete the project at hand. As a result, a large amount of effort is directed toward the coordination of people and resources in order to enable effective performance (Project Management Institute, 2004). Project Management Institute (PMI) (2004) identifies seven processes included in this phase, one of which is team training. Project success is usually measured according to four dimensions: (1) schedule overrun, (2) cost overrun, (3) Project performance and customer satisfaction of project outputs (Kerzner, 2006; Wu and Wang, 2006). Project team training is a major effort that a project manager is responsible for in any project. Project team training is defined as the process of taking a collection of individuals with different needs, backgrounds, and expertise and transforming them into an integrated, effective work unit (Thamhain and Wilemon, 1987). Project team training is included in most project

management textbooks and bodies of knowledge (Kerzner, 2006; Meredith and Mantel, 2006; PMI, 2004).

According to an industry report by the American Society for Training and Development (ASTD), U.S. organizations alone spend more than \$126 billion annually on employee training and development (Paradise 2007). “Training” refers to a systematic approach to learning and development to improve individual, team, and organizational effectiveness (Goldstein & Ford 2002).

In the developed world, successful team working requires careful consideration and design, such issues are addressed within the HR management plan and its related communications and stakeholder management plans (Cullen & Turnbull, 2005.). Generally, the more that an organization has tended towards a traditional hierarchical structure, the greater will be the challenge of implementing effective inter-departmental project teams. Project teams can take on a variety of forms depending on the size of the project and the way in which it is staffed. Project environments range from dedicated and full-time project teams, through to instances where projects have little or no full time resource and operate by using only the resources from existing functional departments (Dvir, Eden, Avolio & Shamir, 2002).

DeCenzo and Robbins (2000) explain training as a learning experience, in that, it seeks a relatively permanent change in an individual that will improve his ability to perform. This means that training must be designed in such a way that, it will involve changing or enhancing of skills, knowledge, attitudes, and social behavior. This change or enhancement of skills, knowledge, attitudes, and social behavior could involve what the employee knows, how he works, his relations and interactions with co-workers and supervisors (Cole, 2002).

Cole (2004), argued that, human resources are the most dynamic resource of the all the resources at the disposal of the organization and thus, the human resource needs to be given considerable attention from managements to enable this resource realize their full potential in their work. Training and development has been a subject of many studies over the years. Raja (2011) conducted a survey of 100 sample, they observed in their studies that there is a positive relationship between training design and organizational performance. Similarly Abeeha and Bariha (2012) in their studies carried out in Pakistan, observed a positive correlation between project team training and performance. Abang, May and Maw (2009) on the other hand, pointed out that Lynch and Black in their studies revealed that only off-the job training improves performance whereas on the job training does not.

Njoroge (2006) stressed the importance of training on the performance level of the individual staff and by implication the organization in general. According to Ilorah (2009), if successful execution of Africa’s latest comprehensive development program, the New Partnership for Africa’s Development (NEPAD) projects, remains the problem, it is in part due to poor

leadership, finances, and institutions. Drawing from social capital theory as a tool, he examines the challenges confronting NEPAD projects and makes recommendations on how to address them. Nazeer (2011) indicates that in Africa, there is more focus on product success than on project management success and that soft skills matter more than technical skills to achieve project outcomes. Hence, he suggests that project management remains in a kind of idle state in Africa and that there is still much to do to increase the chances for projects' success on the continent. Ofori (2011) in an article from Ghana, titled 'An Exploratory Study of Project Management Competency in Ghana,' shows that Ghanaian projects lack the requisite project management expertise and recommends that project management competencies be systematically and deliberately improved through project team training for better project outputs and outcomes.

The concept of teams and teamwork is increasingly important to productivity and employees' organizational commitment in the contemporary workplace. According to Ondingo (2009), project execution in Kenya is totally dependent on training of teams, which facilitates the meeting of affiliate needs within the workplace and has been directly connected to organizational productivity. Anschutz (1995), stated that participation in teamwork, continuous learning and flexibility were the major factors for success within organizations in achieving a partnership between workers and managers in the project context.

Career guidance and counseling has been institutionalized in the public service and all public officers, irrespective of gender, age, race, religion and socio-economic status, will be encouraged to pursue available career opportunities in line with their abilities, talent and interests. The government of Kenya, having recognized the importance of human resource development has integrated guidelines to provide operational and strategic direction for Career guidance and counseling. Public Service organizations have put in place special career guidance and counseling initiatives to address the needs of public servants who become physically and/or psychologically disoriented while in service in order to rehabilitate and reintegrate them in ways that will enhance their performance. Mentoring as an approach to Human Resource Development involves transfer of knowledge, skills, attitudes and competencies from the mentor to the mentee. A mentor can be instrumental in facilitating self-reflective learning, induction, career growth, personal development and change management (GoK, 2008).

The government of Kenya has also instituted coaching as a way of employee training Through coaching the employee is made to accept responsibility for his own actions or omissions and is assisted to address work related problems so as to achieve superior performance. The Coach can apply performance, life, business coaching and facilitative learning for a short period of time and thereafter assign the Coachee the responsibility of continuous learning. Public service organizations have developed and entrenched coaching programs in their human resource development strategies. The Government has developed a framework to guide and entrench

coaching programs in the public service. Public service employees are encouraged to learn and emulate positive behavior from their leaders, senior managers, colleagues and juniors in the internal/external environments. Public service organizations at all levels have institutionalized role modeling programs in their activities by adapting and entrenching a culture of value based leadership and those in positions of leadership shall be expected to be good role models (GoK, 2008).

Project performance has been considered to be tied to project success and this is also tied to project objectives (Chan & Chan, 2004). Project success has been measured based on different dimensions. Sadeh *et al.* (2000) measured project success based on the following five dimensions: Meeting design goals, Benefit to end users, Benefit to the developing organization, Benefit to the defense and national infrastructure, Overall success (a combined measure for project success), Shenhar *et al.* (1997) also proposed that project success is divided into four dimensions: Project efficiency, Impact on customer, Business success and preparing for the future. Chan & Chan (2004) developed a consolidated framework for measuring project success.

The main objective of project performance measurement is its impact on the customers/beneficiaries and this measure has been adopted for measurement of project performance in this study. Measuring the success based on these objectives is considered to yield effective results since project participants are more familiar with performance in with relation to the customers/beneficiaries. Researchers like Walker (1999), have discussed project success with relation to the customers. The overall performance of any project is invariably an aggregation of the performances of its individual objectives. Based on the widely-known and widely-understood nature of projects, project performance is measured in terms of the customers. Nonetheless, organization project success has also been discussed, in few cases, around other project objectives; health, safety and environmental friendliness.

## **1.2 Statement of the Problem**

Training has increased its importance in today's intense environment of global competition and fast change where jobs are complex and often change (Ellis, 2003). As a result, certain project management organizations run training courses for their employees (Maylor, 2010). This is perhaps backed by the Project Management Body of Knowledge (PMBOK, 2008) which highlights training as one of the tools and techniques to develop project teams. Salas and Cannon-Bowers (2001) argued that training of project teams creates performance advantage, provides innovations and opportunities to improve skills, knowledge and overall performance. It follows, as put by Martocchio and Baldwin (1997) that there is a growing awareness in organizations that the investment in training of project teams improves performance and as a result, some project management organizations run training courses for employees (Maylor, 2010). The concept of training of project teams has been made popular by the growing need by project managers to get results out of their operations and to ensure that projects run efficiently

(Rad, 2008). It is also necessitated by the need for project teams to have good technical skills, good problem solving skills and interpersonal skills.

Weiss and Anderson (2003) state that projects are used as a means to achieve an organization's strategic goals. However, in spite of advances in the project management (PM) discipline, the common experience suggests that many projects fail (Williams, 2005). They add that despite the great need that exists that requires training of project teams, many projects have not registered good performance and this has been attributed to the lack of training of project teams.

As a result of this, there exists a gap on how training of project teams can affect performance since most of the past concerns have generalized the aspect of performance while measuring it against general project leadership with less emphasis being laid on project team training. Based on this background, this study emphasizes on the effects of project teams training on performance in Keiyo South Constituency National Government Projects.

### **1.3 Objectives of the Study**

- i. To determine the effects of cost management training on project performance at Keiyo South Constituency Development Projects
- ii. To determine the effects of risk management training on project performance at Keiyo South Constituency Development Projects
- iii. To evaluate the effects of project duration training on project performance at Keiyo South Constituency Development Projects
- iv. To assess the effects of project scope training on project performance at Keiyo South Constituency Development Projects
- v. To assess the effects of project quality training on project performance at Keiyo South Constituency Development Projects

### **1.4 Research Questions**

- i. What are the effects of cost management training on project performance at Keiyo South Constituency Development Projects?
- ii. What are the effects of risk management training on project performance at Keiyo South Constituency Development Projects?
- iii. What are the effects of project duration training on project performance at Keiyo South Constituency Development Projects?
- iv. What are the effects of project scope training on project performance at Keiyo South Constituency Development Projects?
- v. What are the effects of project quality training on project performance at Keiyo South Constituency Development Projects?

## **2.0 Literature Review**

### **2.1 Theoretical Framework**

#### **2.1.1 Theory of Work Adjustment**

This is sometimes referred to as the Person–Environment Correspondence Theory. It was originally developed by René Dawis, George England and Lloyd Lofquist from the University of Minnesota in 1964. The more closely a person’s abilities (skills, knowledge, experience, attitude, behaviors, etc.) correspond with the requirements of the role or the organization, the more likely it is that they will perform the job well and be perceived as satisfactory by the employer. Similarly, the more closely the reinforcers (rewards) of the role or organisation correspond to the values that a person seeks to satisfy through their work, the more likely it is that the person will perceive the job as satisfying. They list six key values that individuals seek to satisfy: Achievement; comfort; status; altruism; safety; and autonomy.

The flexibility of a person or an environment will determine the extent to which they can tolerate any lack of correspondence between abilities and requirements and/or values and reinforcers. Flexibility will vary from individual to individual and from environment to environment. Internal factors, such as personality or organizational culture, will influence the level of flexibility, as will external factors, such as the availability of alternative options. When the lack of correspondence is so great that flexibility is no longer viable, some form of adjustment often takes place.

This theory is based on the assumption that active adjustment by the individual involves them trying to change their working environment. They may seek to change the content of the job, and therefore its behavior requirements, to better reflect their abilities. Alternatively, they may try to alter the reinforcements of the job by seeking to gain different rewards, such as better working conditions or greater variety or responsibility. Active adjustment by the environment may involve trying to change the person’s abilities through training or trying to change their values or expectations in some way.

The current study seeks to investigate how training project teams can affect performance. Reactive adjustment may involve the individual trying to change their behaviors to better suit the environment or by changing their personal priorities or work values. The changing of personal priorities will in most cases be geared towards the achievement of long term project goals which pertain to cost reduction, risk mitigation, reduction of project duration/ time, working within the project’s scope and maintaining quality. Similarly, the environment may change the responsibilities of a role to better suit the natural strengths of the individual or change the rewards to attempt to increase job satisfaction.

### **2.1.2 Holland's Theory of Vocational Personalities in Work Environment**

In the past few decades, the theory by Holland (1985, 1997) has guided career interest assessment both in the USA and internationally. The theory by Holland offers a simple and easy-to-understand typology framework on career interest and environments that could be used in career counseling and guidance. Holland postulated that vocational interest is an expression of one's personality, and that vocational interests could be conceptualized into six typologies, which are Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). If a person's degree of resemblance to the six vocational personality and interest types could be assessed, then it is possible to generate a three-letter code (SIA, RIA) to denote and summarize one's career interest. The first letter of the code is a person's primary interest type, which would likely play a major role in career choice and satisfaction. The second and third letters are secondary interest themes, and they would likely play a lesser but still significant role in the career choice process. Parallel to the classification of vocational interest types, Holland (1985, 1997) postulated that vocational environments could be arranged into similar typologies.

A high degree of match between a person's personality and interest types and the dominant work environmental types (that is, high degree of congruence) is likely to result in vocational satisfaction and stability, and a low degree of match (that is, low congruence) is likely to result in vocational dissatisfaction and instability. The person-environment congruence perspective in Holland's theory is quite similar to TWA's concept of correspondence. In practice, this theory outlines the various conditions that would point to a person's likely interests for training. The current study, in the same way, seeks to find out how training can help in the improvement of performance. The achievement of performance is to an extent related directly to the type of vocational training they receive and if the right training is provided, then an improved can be achieved in terms of cost management, risk management, project duration, project scope and quality.

### **2.1.3 Self-concept Theory of Career Development**

This theory was developed by Super (1969, 1980, 1990) suggested that career choice and development is essentially a process of developing and implementing a person's self-concept. According to Super (1990), self-concept is a product of complex interactions among a number of factors, including physical and mental growth, personal experiences, and environmental characteristics and stimulation. Whereas Super presumed that there is an organic mechanism acting behind the process of development and maturation, recent articulations (Herr, 1997; Savickas, 2002) of Super's theory have called for a stronger emphasis on the effects of social context and the reciprocal influence between the person and the environment.

Building on Super's notion that self-concept theory was essentially a personal construct theory, Savickas (2002) took a constructivist perspective and postulated that "the process of career construction is essentially that of developing and implementing vocational self-concepts in work roles". A relatively stable self-concept should emerge in late adolescence to serve as a guide to career choice and adjustment. However, self-concept is not a static entity and it would continue to evolve as the person encounters new experience and progresses through the developmental stages. Life and work satisfaction is a continual process of implementing the evolving self-concept through work and other life roles.

The current study is intended to find out the effects of project teams training performance and in the same way, the theory stresses on the aspect of self-concept and stresses that career choice and development is essentially a process of developing and implementing a person's self-concept. With this in mind, this theory is viewed as able to bring out the main aspects of career development that impact on the individual's output and which can lead to improved performance in the long run.

#### **2.1.4 Social Cognitive Career Theory**

Social Cognitive Career Theory (SCCT) (Lent, Brown, & Hackett, 2002; Lent, 2005) is anchored in Bandura's self-efficacy theory (1977, 1997), which postulated a mutually influencing relationship between people and the environment. SCCT offers three segmental, yet interlocking process models of career development seeking to explain (a) the development of academic and vocational interest, (b) how individuals make educational and career choices, and (c) educational and career performance and stability. The three segmental models have different emphasis centering around three core variables, which are self-efficacy, outcome expectations, and personal goals. Lent (2005) defined self-efficacy as "a dynamic set of beliefs that are linked to particular performance domains and activities". Self-efficacy expectations influence the initiation of specific behavior and the maintenance of behavior in response to barriers and difficulties. Consistent with early formulation by Bandura (1977) and others (Hackett & Betz, 1981; Betz, Borgen, & Harmon, 1996), SCCT theorized that self-efficacy expectations are shaped by four primary information sources or learning experiences, which are personal performance accomplishments, vicarious learning, social persuasion, and physiological and affective states. The theory stresses three core variables, which are self-efficacy, outcome expectations, and personal goals that can be manipulated to benefit the project outcomes.

### 2.3 Conceptual Framework

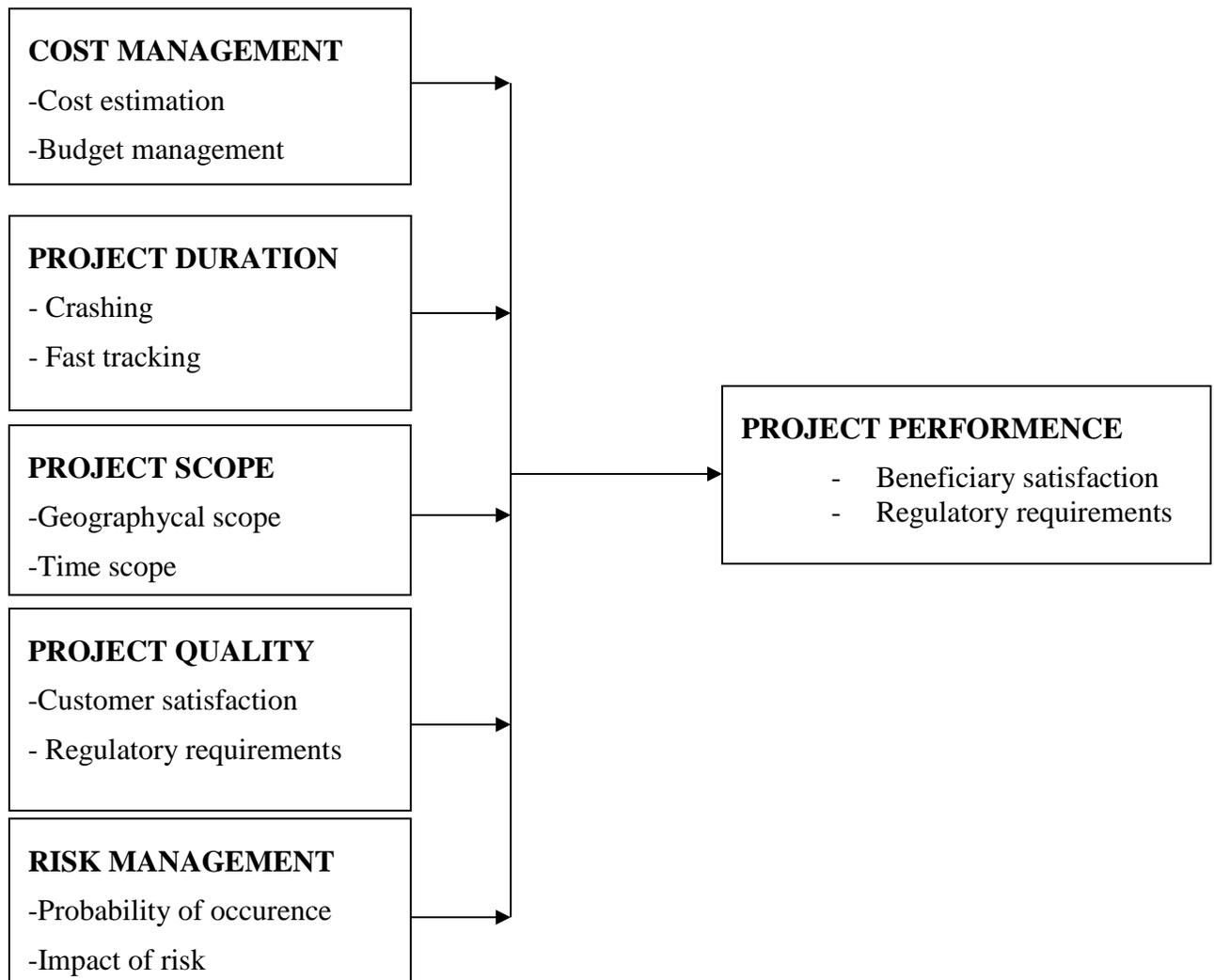


Figure 1: Conceptual Framework

## 2.2: Empirical Review

### 2.2.1 Effects of cost management training on project performance

The establishment of an appropriate budget and time schedule is critical to the success of a project. The client and the design consultants must agree on the anticipated cost early through cost estimation during the planning stage. This is a critical stage in the cost management process since inaccurate estimates can lead to poor project performance. According to Ekesen (2004), it is common mistake at planning stage is to use a schedule of accommodation with areas and apply some historical costs without making adjustments for the many factors which affect costs such as size of the project, location, price increases since the date of the data used, procurement method, overall quality of the space envisioned, access and location factors such as dense urban, traffic and sidewalk protection, water location, bid competitiveness in the local market, etc. ("WBDG," 2011).

Preliminary Estimates are developed during the planning stage of a proposed project in line with a client's needs as expressed in agreed spatial requirements brief and with budget constraints in order to establish its overall scope and quality expectations. The bid based price estimation is most common and relies on using elemental costs tabulations from recently awarded projects of similar size and nature. The preliminary schedule gives an indication of the project duration, critical path items and identifies major milestones. The preliminary schedule identifies the time line dates; absolute or relative to a start date; that a project task or activity will be started and completed. The schedule allows applicable resources to be identified and an anticipated timeframe to be established. This estimated time provides the basis for budgeting individual tasks and the project as a whole (Ekesen *et al*, 2004).

Problem analysis identifies the negative aspects of an existing situation and establishes the "cause and effect" relationships between the identified problems. The problem analysis involves the definition of the framework and subject of analysis and the identification of the major problems faced by target groups and beneficiaries; and the visualization of the problems in form of a diagram, called a problem tree to help analyse and clarify causeeffect relationships. The analysis is aimed at identifying the real bottlenecks which stakeholders attach high priority and which they wish to overcome. The problem analysis provides a sound foundation on which to develop a set of relevant and focused project objectives. Involving stakeholder representatives with appropriate knowledge and skills is critical to the quality of the output (Clough *et al*, 2005).

Many project managers get caught off guard with escalating costs, suppliers that couldn't meet quoted obligations or other issues. The lack of qualified staff to deal with these factors has been viewed as a disadvantage to the performance of the projects (Aubry, 2011).

Budgeting is allocating costs to work packages to establish a cost baseline to measure project performance. Budgeting involves planning for Contingency items for unplanned but required

changes. An important part of staying on budget is to make sure all team members are aware of the current budget status as well. Keep the project team informed of the project budget forecast. An informed team is an empowered team that takes ownership of its projects. By keeping the team informed of the budget status, they will be more likely to watch their project charges and far less likely to charge extra “grey area” hours to your project hours they know they worked but weren’t clear about what they were working on.

The project budget must be a living part of a project meaning it should be reviewed with the team and stakeholders on a regular basis. Project managers who carefully watch budgets throughout the lives of their projects will keep stakeholders and management happy and thus experience greater project and career success. It’s hard to effectively manage a project budget without establishing key performance indicators (KPIs). KPIs help ascertain how much has been spent on a project, the extent to which the project’s actual budget differs from what was planned, and so on (Cleden, 2009).

Beginning with estimating, a vital tool in PCM, actual historical data was used to accurately plan all aspects of the project. As the project continues, cost control uses data from the estimate with the information reported from the field to measure the cost and production in the project. From project initiation to completion, project cost management has an objective to simplify and cheapen the project experience (Kathy, 2014).

### **2.2.2 Effects of Risk Management training on project performance**

Project risk management is an important aspect of project management. According to the Project Management Institute's PMBOK, Risk management is one of the ten knowledge areas in which a project manager must be competent. Research findings of 100 projects in Israel concluded that risk management practices are not widely used by Project Managers, but when they are used, they appear to be related to project success (Raz *et al.*, 2002). Findings of recent international and multi-industrial research that suggests that ‘risk management planning’ provides effective processes to reduce uncertainty and improve project success rates (Zwikael & Ahn, 2011).

Project risk is defined by PMI as, "an uncertain event or condition that, if it occurs, has a positive or negative effect on a project’s objectives. Project risk management remains a relatively undeveloped discipline, distinct from the risk management used by Operational, Financial and Underwriters' risk management. This gulf is due to several factors: Risk Aversion, especially public understanding and risk in social activities, confusion in the application of risk management to projects, and the additional sophistication of probability mechanics above those of accounting, finance and engineering.

Cleden (2009) claims that complexity is a factor that can limit a project; the bigger and more complex a project is, the more resources are required to complete it. Moreover, when all potential risks have been identified, the project team must remember that there might be more

threats. Therefore, the project team should not solely focus on management of those identified risks but also be alert for any new potential risks which might arise. Risk management should be used as a tool to discover the majority of risks and a project manager should be also prepared for managing uncertainties not included in a risk management plan (Cleden, 2009).

A risk, by its very nature, always has a negative impact. However, the size of the impact varies in terms of cost and impact on health, human life, or some other critical factor. To minimize the impact of risks and maximize the efficiency of risk management, the risk management planning should be continuously developed during the entire project. In this way, risks are discovered and managed throughout all the phases (Smith et al. 2006). The benefits from risk management are not only reserved for the project itself, but also for the actors involved. The main incentives arising from experienced project teams are clear understanding and awareness of potential risks in the project. In other words, risk management contributes to a better view of possible consequences resulting from unmanaged risks and how to avoid them (Thomas, 2009). Another benefit of working with risk management is increased level of control over the whole project and more efficient problem solving processes which can be supported on a more genuine basis.

### **2.2.3 Effects of Project Duration training on project performance**

In an RICS research paper Morledge *et al.* (1996) in which data was collected in relation to 215 completed projects of commercial and industrial nature, it was found out that 136 (63%) were delivered late. It was contended that the lateness was mainly due to unrealistic expectation of stakeholders about the project duration during the implementation stage.

According to Smith, Shenhar, Dvir, Levy and Maltz (2006) Project duration refers to the total sum of working periods that characterize the time length of project work and are required to complete all the activities listed in the project schedule and all the components of the work breakdown structure, considering the allocation and consumption of all necessary human resources and financial resources. The project duration is the basic project management characteristic that is usually expressed in terms of working time units (hours, days, weeks, months, years).

In project management, duration describes the time frame between the start of a project to the completion of it. In short, the duration of a project is the time it takes the project team to finish all tasks. The project manager needs to set the duration for each step in the project schedule and the sum of all these durations constitutes the duration for the whole project. Sometimes unforeseen events happen that can lengthen the duration of the project, this in turn can affect the project triangle (Darnall and Preston, 2010). Managing project duration to make sure the sponsor and stakeholders are happy is the number one challenge for most project managers. Many executives think the most important metrics are the project duration and the finish date. Sometimes they are the only measures the sponsor and stakeholders ask about.

Such situations reflect what Kumaraswamy and Chan (1995) found out in their investigations into determinants of implementation duration. They concluded that the overall timescales of many projects appear to be established as a consequence of commercial and/or political considerations. They argued that subsequent planning and programming methodologies are then designed to meet these time targets, rather than any objective assessment of durations. Project teams are therefore made to face increased pressure. Ward *et al.* (1991) also identified that stakeholder time expectations are frequently based upon either their own experience of similar works or on advice from ‘specialist advisors’.

Crashing is the technique to use when fast tracking has not saved enough time on the schedule. It is a technique in which resources are added to the project for the least cost possible. Cost and schedule trade-offs are analysed to determine how to obtain the greatest amount of compression for the least incremental cost. Crashing has been used as another schedule compression technique where the project team adds extra resources to the project to compress the schedule. In crashing, the project team reviews the critical path and see which activities can be completed by adding extra resources. The project team tries to find the activities that can be reduced the most by adding the least amount of cost. Once the project team finds those activities, the team will apply the crashing technique (Aubry, 2011).

Fast tracking is a technique where activities that would have been performed sequentially using the original schedule are performed in parallel. In other words, fast tracking a project means the activities are worked on simultaneously instead of waiting for each piece to be completed separately. But fast tracking can only be applied if the activities in question can actually be overlapped. When there is need to compress a schedule, it is important to consider this technique first, because fast tracking usually does not involve any costs. This technique simply rearranges the activities in the original schedule (Darnall & Preston, 2010).

#### **2.2.4 Effects of training on Project Scope on project performance**

A well-developed project scope statement provides the project team with information the team needs to design and implement the project execution plan. The well-developed project scope also provides the team with an understanding of the purpose of the project and the basis for defining project success. Training of team members on the scope of work for a project includes the identification of the knowledge, skills, and abilities needed by each classification of worker and the development of the delivery methods (online, classroom, hands-on) that will effectively and efficiently teach the identified knowledge, skills, and abilities (Jajac & Adjuk, 2013).

The project manager will often develop the first draft of the project scope and then solicit feedback and suggestions from the project team, client, and sometimes key vendors. The project manager will attempt to develop consensus around the project scope, but the final approval belongs to the project client or sponsor. Depending on the complexity profile of the project, the

development of the project scope document can be a short discussion between the project manager and the client, or on a large, complex project, the process can take weeks. The project scope is not a stagnant document, and changes are to be expected. Changes to the project scope are necessary to reflect new information (Smith *et al.*, 2006). Changes to the project scope also create the opportunity for new purposes to emerge that will change the end results of the project. In some cases, these new results represent a positive outcome for the chartering organization. If a minor change is made to the schedule that does not affect the completion date of the project, it is a deviation from the schedule. As long as the end date of the project or major objectives are not delayed, a formal change request to the client is not needed. Recording and communicating these schedule deviations is still important for coordinating resources and maintaining the client's awareness of the project's progress.

A project's scope is formed of all the work that must be accomplished to successfully deliver a product, service, or result. At the outset of your project, effort should be made to ensure that there are no gaps in the statement of work that can lead to scope changes later in the execution phase. Project scope management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully (Jajac, Bilic &Adjuk, 2013).

Project team members actively work on one or more phases of the project. They may be in-house staff or external consultants, working on the project on a full-time or part-time basis. The decision-making about location of investment is complex, low structured and multi-criteria problem (Jajac, Bilic &Adjuk, 2013). The site selection is a lifecycle decision that recognizes the balance among the initial cost of the real estate, the overall cost of executing the project, and the cost of operating the facility. All factors must be considered, in addition to the key factor of cost, in order to make the right decision. Critical decisions made at the very beginning of every capital development project have major consequences for the overall success of the project. The site affects the organization, massing; functionality; sustainability; operation and economic efficiency; security; and lastly the aesthetic qualities of a building (GSA, 2001). The decision-making about the location of a construction site is an important risk management practice at planning stage. Buildings are inseparable from the location. The location has a strong influence of building design and structural characteristics and thus the execution of the project (Jajac, Bilic, &Adjuk, 2013).

Good interpersonal skills are key to successful team development. The project manager and the team members need to work together to recognize each other's strengths and weaknesses. This will engender good team spirit and cooperation. The project manager needs to be a good facilitator to develop the valuable assets that are the team members.

Focused training is important and this should be based on delivering the technical skills required. This is often achieved by coaching and mentoring and will also be the outcome of performance

appraisals. Project team members are actively involved in the project's time scope. Formal and informal team-building activities will play a part in bonding the team members and are particularly valuable when the team operates from disparate and remote locations (Jajac, Bilic, & Adjuk, 2013).

### **2.2.5 Effects of Project Quality training on project performance**

Quality has been defined as "the totality of characteristics of an entity that bear on its ability to satisfy stated or implied needs (Geneva, Switzerland: ISO Press, 1994) The stated and implied quality needs are the inputs used in defining project requirements from the donor and the beneficiaries. It is also defined as the "Conformance to requirements or fitness for use (Juran, 1951); which means that the product or services must meet the intended objectives of the project and have a value to the donor and beneficiaries and that the beneficiaries can use the material or service as it was originally intended. The central focus of quality management is meeting or exceeding stakeholder's expectations and conforming to the project design and specifications.

According to a research paper by Cook (1999), management must create a project management methodology that defines the project life cycle and the process, right down to what is required, when it is required and how it is done, to reinforce quality. A complete set of instructions, forms, tools and templates is necessary to ensure consistent repeatable performance across the organization. A training program, tailored to the new methodology, is necessary to teach and reinforce use of the methodology. Outside consultants may be required to diagnose and correct existing problems while future project managers are in training.

Part of defining quality involves developing a quality plan and a quality checklist that will be used during the project implementation phase. This check list will ensure the project team and other actors are delivering the project outputs according to the quality requirements. Once the project has defined the quality standards and quality characteristics, it will create a project quality plan that describes all the quality definitions and standards relevant to the project, it will highlight the standards that must be followed to comply to regulatory requirements setup by the donor, the organization and external agencies such the local government and professional organizations (Stewart, 2009).

A project involves the transformation of inputs into an output or product. In all the processes involved in the project life cycle, customer satisfaction is a key measure of a project's quality. It's important to keep in mind that project quality management is concerned with both the product of the project and the management of the project. If the customer doesn't feel the product produced by the project meets their needs or if the way the project was run didn't meet their expectations, then the customer is very likely to consider the project quality as poor, regardless of what the project manager or team thinks. As a result, not only is it important to make sure the project requirements are met, managing customer expectations is also a critical activity that you need to

handle well for your project to succeed. Planning Quality and Cost Effectiveness into the project must take place at the concept stage, well before the project is turned over to engineering and construction. In the two latter stages, quality must not only be managed, but also monitored into the project.

Given that the concept planning is solidified and exact project parameters are established, quality management then comes to the fore. The Project Manager must devise, tailor and implement his quality program/systems for the specific project. The following are considerations that are essential for the management of quality and cost effectiveness in the project: A quality function must be built into the project staff. This function, manned by an individual responsible only to management, must be dedicated to quality throughout the project and must be fully aware that in effectively doing his job, he isn't going to win many popularity contests (Chan & Tam, 2000). This function is responsible for implementing and monitoring quality systems and checks throughout the entire project, to include planning and engineering, bid packages, procurement, construction/installation and start-up of the completed facility or operation. The Project Manager has the responsibility to assure that the quality function is well organized and practical for the project.

The total project team, from engineering through the construction manager, contractors, and start-up group, should be working in concert toward the common goal of quality and cost effectiveness in the project. This involves a constant education process, emphasizing and inspiring team work, communications, professionalism, and pride of workmanship and the conscientious involvement of every member of the total team. Involvement is key to the success of the project because the more a person feels he is contributing to the success of a project, the greater will be his effort to assure that success (Eliane, 2008).

Projects of all kinds, small or large, have regulatory process requirements. Small projects are receiving a great deal of attention by agencies. Additionally, for the owner, his project is always important regardless of its size. It is important to recognize that the regulatory process starts at the inception of any project. From the owner's viewpoint it is in his best interest to get the professional involved early, even before site selection. Both the real and emotional problems connected with the project have to be considered. In the event that an event is to be carried out and there are no qualified staff members with respect to quality compliance and regulatory compliance, it is important to either train the existing staff members or acquire new staff (Atkinson, 1999).

The planning for the regulatory process should begin with the identification of the cognizant agencies which administer permit requirements. To the extent that the various members of the team understand the importance of compliance, all activities and their corresponding compliance objectives shall be allocated as parts of the project's tasks and processes. Project managers must

extract themselves from the compliance responsibility and act only as coordinators of the resources and activities required to achieving the proposed objectives (Bellasi & Tukul, 1996).

### 3.0 Research Design

This study employed a survey design in obtaining responses from the respondents in determining the effect of project teams training on project performance. This study targets a population of 120 projects run by the national government in Keiyo south constituency. In this study, the researcher assumes that the national government conducts training on all project teams; the researcher interviewed the team leaders on behalf of the entire team since they are the individuals responsible for organizing project teams training and beneficiaries of the projects to assess performance and this was the sampling frame. The sample size of the study was 120 respondents. The main tools that was used for data collection was questionnaires. The data was analyzed descriptively using SPSS; collected information was examined, categorized and tabulated into various frequency tables and percentages to help in easier interpretation of data.

The study made use of inferential statistics. The variables were factored into a linear and Multivariate regression model. The independent variables were measured in Likert scales, mean values and percentages calculated.

The simple linear regression Model ( $Y = \beta_0 + \beta_1 X_n$ )

Where  $X_n = X_1, X_2, X_3, X_4$  and  $X_5$

The multivariate regression equation ( $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$ ):

Where  $Y =$  Project performance (beneficiary satisfaction)

$X_1 =$  Cost Management

$X_2 =$  Risk Management

$X_3 =$  Project Duration

$X_4 =$  Project Scope

$X_5 =$  Project Quality

$\epsilon =$  Error term

## 4.0 Findings and Discussions

### 4.1 Descriptive Statistics

**Table 1: Effects of Training Project Teams on Cost Management**

	SD%	D%	N%	A%	SA%
Projects are able to make good cost estimates as a result of training on cost management	2	9	21	46	23
Training enables the team stay within budget through the project cycle	3	5	17	51	25
Training of project teams ensures cost control and as a result overall cost effectiveness in the use of resources	4	6	21	50	20
By training on cost management, it is possible to reduce the overall cost incurred in running the project	7	9	18	52	15

**Table 2: Effects of Training Project Teams on Risk Management**

	SD	D	N	A	SA
Training on risk management enable project teams identify different types of risks and plan for their occurrence.	1	10	30	38	21
When trained, project team members are able to assess probability of occurrence of risks therefore effectively plan for them	0	12	32	43	13
Training project teams enables them assess impacts of risk therefore plan for their impact	3	14	28	37	18
Training of project teams eliminates possibility of project failure due to unforeseen events	1	12	37	3	17

**Table 3: Effects of Training Project Teams on Project Management**

	<b>SD%</b>	<b>D%</b>	<b>N%</b>	<b>A%</b>	<b>SA%</b>
Training of project teams enables them to be in a better position of making estimation of the project duration	5	1	28	35	17
Training enables project deploy strategies to effectively manage project duration	4	12	25	41	19
Training of project teams enables them to effectively manage resources ensuring projects are completed within stipulated time	3	16	28	42	11
Training on managing project duration has enable project effectively manage stakeholder’s expectation on project completion time	2	14	21	48	18

**Table 4: Effect of training Project Teams on Scope**

	<b>SD%</b>	<b>D%</b>	<b>N%</b>	<b>A%</b>	<b>SA%</b>
Trained teams are able to perform efficiently, enabling the achievement of project scope	1	11	21	44	24
When trained, the project team members tend to register improved performance which promotes the achievement of project scope	4	9	26	41	20
Training improves the way employees relate with each other and eliminates any hindrances related to the achievement of project scope.	0	13	30	48	9
Training of project teams minimizes disputes and conflicts with project stakeholders	2	12	17	49	21

**Table 5: Effects of Training Project Teams on Project Quality**

	<b>SD%</b>	<b>D%</b>	<b>N%</b>	<b>A%</b>	<b>SA%</b>
Project teams can identify and set appropriate quality standards as a result of training on project quality	4	16	30	35	15
Training project teams on quality management has generally increase satisfaction among beneficiaries.	2	10	26	40	22
Training teams on project quality has greatly increased projects ability to meet regulatory requirements.	2	14	30	40	14
Training on Project quality enables project satisfies stakeholder’s requirements.	1	12	23	46	19

From the findings, training on Project quality enables project satisfy stakeholder’s requirements recorded a majority of respondents agreeing with 35% response rate, respondents also agreed that training project teams on quality management has generally increase satisfaction among beneficiaries as with 40% response rate, training teams on project quality has greatly increased projects ability to meet regulatory requirements as illustrated by 40% response rate, respondents also agreed that project teams can identify and set appropriate quality standards as a result of training on project quality as shown by response rate of 46%.

**Table 6: Level of Satisfaction**

	SD%	D%	N%	A%	SA%
The project has met the intended goals	3	5	17	51	25
The project was done within the stipulated time frame	4	6	21	50	20
The beneficiary community has been involved in implementing the project.	5	15	28	35	17
Beneficiary community concerns have been well addressed.	4	12	25	41	19
The project has reached its targeted population.	3	16	28	42	11
The project has impacted positively on the environment	2	14	21	48	16
The project has met the set quality standards.	0	1	32	43	13
The project has achieved efficient resource utilization	3	14	28	37	18
Project risk have been reduced substantially	1	12	37	33	17
The project has been implemented in a professional and ethical manner.	3	9	37	36	15

The respondents agree that beneficiary community has been involved in implementing the project as shown by a majority response of 51%, Project risk have been reduced substantially recorded agree at 50% of the responses, respondents also agree that project has met the intended goals at 35% majority response and that beneficiary community concerns have been well addressed as depicted by 41% response rate. The project was done within the stipulated time frame as depicted by 42% agree response. The project has been implemented in a professional and ethical manner recorded 48% agree response. Respondents also agreed that the project has met the set quality standards at 43%. The respondent agreed that the project has achieved efficient resource utilization as shown by 37% response. Respondents were undecided on the statement that project risks have been reduced substantially with 33% neutral response and

finally has project has been implemented in a professional and ethical manner 36% of the respondents agree with the statement.

#### 4.2 Inferential Statistic

**Table 7: Coefficient of Correlation**

		<b>Cost management</b>	<b>Risk management</b>	<b>Project duration</b>	<b>Project scope</b>	<b>Project quality</b>
<b>Cost management</b>	Pearson Correlation	1				
	Sig. (2-tailed)					
<b>Risk management</b>	Pearson Correlation	0.32	1			
	Sig. (2-tailed)	0.0014				
<b>Project duration</b>	Pearson Correlation	0.1271	0.276	1		
	Sig. (2-tailed)	0.0364	0.0458			
<b>project scope</b>	Pearson Correlation	0.1846	0.1107	0.2496	1	
	Sig. (2-tailed)	0.0031	0.0421	0.0031		
<b>Project quality</b>	Pearson Correlation	0.0072	0.2335	0.0477	0.1027	1
	Sig. (2-tailed)	0.0032	0.0021	0.012	0.0172	
<b>Project performance</b>	Pearson Correlation	0.507	0.532	0.624	0.51	0.558
	Sig. (2-tailed)	0.037	0.0021	0.037	0.0172	0.042

### 4.3: Regression Analysis

**Table 8: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.738	0.545	0.214	0.160

All the five independent variables that were studied, explain 54.5% project performance as represented by the adjusted R<sup>2</sup>. This project performance is attributed by other factors not investigated in this study. Therefore, there is a dare need for further research that should be conducted to investigate the other factors (45.5%) that that contribute to project performance.

**Table 9: Analysis of Variance**

Model	Anova	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.828	5	.566	.961	.000 <sup>a</sup>
	Residual	56.518	96	.589		
	Total	59.345	101			

As per the SPSS generated Table 9, the equation

( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \epsilon$ ) becomes:

$$Y = 1.180 + 0.501X_1 + 0.512X_2 + 0.545X_3 + 0.504X_4 + 0.529X_5$$

The regression equation above has established that taking all factors into account (cost management, risk management, project duration, project scope and project quality) constant at zero, project performance will be 1.180. The findings presented also shows that taking all other independent variables at zero, a unit increase in cost management will lead to a 0.501 increase in project performance; a unit increase in risk management will lead to a 0.512 increase in project performance; a unit increase in project duration will lead to a 0.545 increase in project performance, a unit increase in project scope will lead to a 0.504 increase in project performance and a unit increase in project quality will lead to a 0.531 increase in project performance. This infers that project duration contribute most to project performance followed by project quality then risk management and project scope while cost management contribute little to project performance. This notwithstanding, all the variables were significant as their P-values were less than 0.05.

**Table 10: Regression Coefficients**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.180	0.330		0.245	0.0388
Cost management	0.501	0.231	0.700	1.180	0.0271
Risk management	0.512	0.291	0.145	1.557	0.0160
Project duration	0.545	0.132	0.110	1.324	0.0124
project scope	0.504	0.268	0.351	1.023	0.0432
Project quality	0.529	0.127	0.249	1.9302	0.0173

## 5.0 Conclusion

The study concluded that most of the organizations plan for resources during the budgeting process. This is clearly manifested by the respondents indicating that training enables the team stay within budget through the project cycle. Projects are able to make good cost estimates as a result of training on cost management. The study also concluded that by training on cost management, it is possible to reduce the overall cost incurred in running the project. To the objective risk management, the study concluded that when the when trained, project team members are able to assess probability of occurrence of risks therefore effectively plan for them. Training project teams enables them assess impacts of risk therefore plan for their impact. The study also concluded that training on risk management enable project teams identify different types of risks and plan for their occurrence. On risk management, the study concluded that that training on managing project duration has enable project effectively manage stakeholder's expectation on project completion time. The study also concluded that training enables project deploy strategies to effectively manage project duration is key. Training of project teams enables them to be in a better position of making estimation of the project duration and training of project teams enables them to effectively manage resources ensuring projects are completed

within stipulated time. To the objective of project scope, the survey concluded that training of project teams minimizes disputes and conflicts with project stakeholders. Trained teams are able to perform efficiently, enabling the achievement of project scope. Training improves the way employees relate with each other and eliminates any hindrances related to the achievement of project scope. To the objective of project quality, the studies concluded that training on project quality enables project satisfy stakeholder's requirements. Training project teams on quality management has generally increase satisfaction among beneficiaries. Training teams on project quality has greatly increased projects ability to meet regulatory requirements. Project teams can identify and set appropriate quality standards as a result of training on project quality.

#### **6.0: Recommendation**

Based on the objectives of the study, the following recommendations were reached. The study recommends that since time schedule is one of the most important plans in a project. The development of time schedules should be based on the previously developed WBS. Likewise, in order to develop realistic and achievable schedules, it is important that activities are sequenced accurately. The activity sequencing involves identifying logical relationships and dependencies between the project activities. A time schedule without control is fairly useless to the project organization. The control must be carried out regularly and relatively often in order to detect deviations early. This makes it possible for the project team to take necessary actions to avoid longer delays. The schedule control and development must be an iterative process in order for the project team to have updated schedules throughout the project.

The study recommends that there is need to develop a clear project scope that can facilitate for the project organization to realize the actual magnitude of the work and creates an understanding for the achievements that are required in the project. Likewise, the study recommends that there is need to have a well-designed WBS since it makes it easier to assign clear responsibility to each group of tasks, which is necessary in order for the project organization to gain control of the project.

The study recommends that since project budget is very important and influences all areas in both planning and execution of a project. It is important to keep track of total costs as well as costs for different work packages in a project. The cost estimation should be based on the project scope, the WBS and be connected to the project plan. To reach a correct estimation it is important that each activity is estimated based on the conditions of the execution of the specific activity.

The study recommends that risk analysis should be carried out early in a project when the information is highly limited within several areas. To manage risks and opportunities effectively, the analysis must be iterated throughout the project as more and more information becomes clear to the management team. All persons associated with a project should be encouraged to identify

risks. It is important to have the project team involved in the identification process so that they can develop and maintain a sense of ownership and responsibility for the project risks and associated risk response actions.

## 7.0 References

- Abang, N. May, H. F., & Maw, L, V. (2009). *Principles of general psychology*. New York: Ronald Press Co.
- Abeeha, M. & Bariha, A., H. (2012). The impact of HRM1 on project success: an empirical study in oil and gas construction industries of Iran the 3rd *International Conference on Project Management (ProMAC2006) Sydney Australia*.
- Agarwal, N. & Rathod, U. (2006). Defining 'success' for software projects: An exploratory revelation. *International Journal of Project Management*, 24(4), 358-370.
- Anschutz, R. (1995). *Team Building is a much a part of project success as technical skills*. Project Management Network September 44-51.
- Atkinson, R. (1999). Project management: cost, time and quality, two best guesses and a phenomenon, it is time to accept other success criteria. *International Journal of Project Management*, 17(6): 337-342.
- Aubry, M.; (2011); The social reality of organizational project management at the interface between networks and hierarchy. *International Journal of Managing Projects in Business*; 4 (3), 436-457.
- Augustine S., Bob P., Fred S., and Susan W. (2005). *Agile project management: Steering from the edges*. Communications of the ACM, 48(12), 85-89.
- Belmont: Thomson Wadsworth.

Chan, A. P. C. and Tam, C. M. (2000), “Factors affecting the building quality of building project in Hong Kong” *International Journal of Quality & Reliability management*, Vol. 17 Nos. 4/5, pp. 423-441.

Cleden, E.; (2009); *How multinationals can counter gray market imports*; Columbia 68

Clough, S., Diallo A, Thuillier D (2005). *The success dimensions of international development projects: The perceptions of African project coordinators*. *Int. J. Project Manage.* 22(1):19-31.

Cohen, G. & Bailey, L, M. (1997). *Training undergraduates to work in organizational teams* *Academy of Management Learning and Education* 3 1 27

Cole, J, A. (2002). *Team performance and training in complex environments: Recent findings from applied research* *Current Directions in Psychological Science* 7 3 83-87.

Cook, R. (1999), “Benchmarking new product performance: results of the best practices study”, *European Management Journal*, Vol. 16, pp. 1-17

Cooke-Davies, T., 2000. *Towards Improved Project Management Practice, Uncovering the Evidence for Effective Practices through Empirical Research* (diss.). *Dissertation.com*.

Darnall, V.; Preston, I.; (2010); *Communications management in Scrum projects*; *Proceedings of the 71*

Dyir, J., Eden, N., Ayolio, S. & Shamir, B. (2002). *Understanding the people and performance link: Unlocking the black box*. *Chartered Institute of Personnel and Development, London*.

Ekesen, V. M.; (2004); Risk assessment can be a game-changing information technology – buttooften it isn't; *Risk Analysis: An International Journal*; 33 (11), 1942-1951. Javed, A. A.; Lam.

Éliane L. M, (2008), *Causes of Failure in the Implementation of Project Management*, PMC Thesis, Project management Centre Inc., Ottawa.

Ellis, M., N. (2003) Firm performance and information technology utilization in the Construction industry. *Journal of Construction Engineering and Management*, 132 (5), 499 – 507.76

Gravetter, J. G., & Wallnau, B. L. (2007). *Statistics for the behavioral sciences* (7<sup>th</sup> ed.).

Jajac, M., and Adjuk, S. (2013); Output-based specifications for PPP projects: Lessons for facilities management from Australia; *Journal of Facilities Management*; 11(1), p5-30.

Kerzner, H. (2006). *Project Management, a system-oriented approach to planning and control*, mitp, 2nd edition, Heidelberg.

Kombo, D.K. & Tromp, D.L.A. (2005): *Proposal and Thesis Writing: An Introduction Africa*, Nairobi. Paulines Publications.

Koskela, L. and Howell, G. (2002). The Underlying Theory of Project Management Is Obsolete. *Proceedings of the PMI Research Conference*, pp. 293-302.

Kothari, C. R. (2008). *Research Methodology, Methods and Techniques*. India, K.K. Gupta.

Ling, S., Lotta, A., and Gattiker, U. E. (2002). Rewards and organizational commitment across structural characteristics: A Meta-Analysis, *Journal of Business and Psychology*.

- Martocchio, S., and Baldwin, F. O. (1997) Human resource strategy and firm performance in Pacific Rim countries. *International Journal of Human Resource Management*, 14(8):1308- 1332.
- Maylor, R. N. (2010), *Employee withdrawal behavior* (pp. 71-94). Springer US.
- McShane, S .L. &Glinow, M.A.V (2002). *Organizational behavior*, 4th edition.
- Meredith, J, R., & Mantel S, J. (2006). *Project Management – A Managerial Approach* 6th Ed. John Wiley and Sons.
- Mohrman G. (1995). Interviewing’ In *Qualitative Research Methods in Human Geography*. I.
- Morledge, R. & Sharif, A. (1996) *Client Time Expectations and Construction Industry Performance*; Proceedings of COBRA’96, University of the West of England.
- Mugenda, M.O, &Mugenda G.A. (2006). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: ACTS Press.
- Njoroge, E., (2006). The effect of management commitment to service quality on employees’ affective and performance outcome, *Journal of Academy of Marketing Science*, vol. 31, no. 3, pp. 272– 286.
- Ondingo, M., J. (2009). Operations strategy configurations in project process firms *International Journal of Operations and Production Management*, 25 5/6; p 429-448.
- Oso, W. and Onen, D. (2008). *A general Guide to Writing Research Proposal and Report. A Hand Book for Beginning Researchers*, 2<sup>nd</sup>Edn, Makerere University, Uganda.

Packendorff, J. (1995). Inquiry into the Temporary Organization: New Directions for Project Management Research. *Scandinavian Journal of Management*, 11(4), pp. 319-333.

Paradise, A. (2007), *State of the Industry: ASTD's Annual Review of Trends in Workplace Learning and Performance* (Alexandria, VA: ASTD).

Project Management Institute (PMI). (2004). *Project management competency development (PMCD) Framework*. 2nd ed., PMI, Newtown Square, PA.

Project Management Institute (PMI). (2013). *A guide to the project management body of knowledge (PMBOK® guide)*. 5th ed., PMI, Newtown Square, PA.

Rad, T. (2008). The effect of management commitment to service quality on employees' affective and performance outcome, *Journal of Academy of Marketing Science*, vol. 31, no. 3, pp. 272– 286.

Shaughnessy, J. M. (2011). Research on statistics learning and reasoning. In F. K. Lester Jr (Ed.), *Second Handbook of Research on Mathematics Teaching and Learning* (pp. 957-1009). Reston: The National Council of Teachers of Mathematics.

Shenhar, A., and Dvir, D. (1996). Toward a Typological Theory of Project Management. *Research Policy*, 25, pp. 607–32.

Smith, A., Shenhar, A.J.; Dvir, D.; Levy, O.; Maltz, A.C. (2006) *Project Success: A Multidimensional Strategic Concept*. Elsevier

Soderlund, J. (2004). Building Theories of Project Management: Past Research, Questions for the Future. *International Journal of Project Management*, 22, pp. 183 191.

Stewart, D. (2009) Services: Setting the Agenda for Reform. *Department of Industry Technology and Commerce, Centre for International Economics, Australia.*

Thamhain, H.J. and Wilemon, J. (1987). Linkages of project environment to performance: lessons for team leadership. *International Journal of Project Management* 22(7), 533–44.

Thomas, M (2009). Risk management, chaos theory and the corporate board of directors. *Paper presented at Loyola university of Chicago academic conference themed “corporate boards: sources of risks, managers of risk.*

Wu, J., H., Wang, Y., M. (2006), Measuring ERP success: the ultimate users' view *International Journal of Operations and Production Management* 26 8 p 882.

Zwikaël, D., and Ahn. W. H. (2011). The role of fair treatment and rewards in perceptions of organizational support and leader–member exchange, *Journal of Applied Psychology Association.*

Zyl, P. X., Zhang, G. M., & Wang, J. (2015). Understanding the Key Risks in Construction Projects in China. *International Journal of Project Management*, 25, 601-614. McGraw-Hill