INFLUENCE OF PROJECT MANAGEMENT INFORMATION SYSTEMS ATTRIBUTES ON PROJECT PERFORMANCE: A CASE OF YOUTH POLYTECHNIC DEVELOPMENT PROJECTS IN EMBU COUNTY, KENYA

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ABSTRACT

Organizational performance is one of the most imperative constructs in management research. Development projects are generally recognized as successful when they are finished on time, within budget, and in harmony with specifications and to stakeholders' satisfaction. Many of the projects exceed the original cost; get cancelled prior to completion, while others fail in terms of the delivered functionality. While a lot of time and resources are dedicated to selecting and designing projects, it remains of vital significance that projects be adequately managed in organizations so that they can achieve their performance objectives. The purpose of the study was to establish the influence of Project Management Information System attributes on project performance in the youth polytechnics; a case of Embu County, Kenya. The Objectives of this study was to determine the influence of PMIS system software on performance of polytechnic development projects, to establish the influence of quality information generated by PMIS on performance of polytechnic development projects, to assess the influence of PMIS user on performance of polytechnic development projects and to determine the influence of PMIS use on performance of polytechnic development projects. Descriptive survey research design was used to enable the researcher obtain the opinions of project managers in their natural setting. The study used a sample of 10 managers derived from a target population of 32, 43 instructors derived from a target population of 143 and 27 support staff derived from a target population of 90. Simple Random sampling technique was used to select the samples from the target population. Questionnaires were used to collect Data. Data was analyzed by use of descriptive statistics; frequency tables mean. Cronach's alpha test was used in assessing reliability of research instrument which was 0.917. Hence the instrument was reliable. Descriptive statistics and Correlation (using the Pearson's coefficient of correlation) was used to establish the relationship between the dependent variables and the set of independent variables at 5% level of confidence using the SPSS version 20 software. The research found out that the use of the software to generate quality information needed by the user (project manager) to perform project tasks helped the project managers perform their tasks in a more professional manner thus increasing the probability of the project success. The quality of the system software has a major impact on the acceptance of the system, its effect on the efficiency and effectiveness of the performance in organizations. The quality of information is directly and strongly related to project management information system use and to the system's impacts on the project manager. The system's ease of use, accessibility, learn capability and flexibility play an important role in producing relevant, accurate and secure information as perceived by the development project manager for the success of the development projects. The use of various function tools i.e. planning, monitoring, Evaluation and reporting tools had led to improving the probability of project performance due to the quality of information generated by the PMIS. All the independent variables had a significant relationship to the dependent variable, because the p-value in all the relationships

was 0.000 which is less than the alpha value (level of significance) 0.01. It was therefore concluded that it is not the complexity of the software that matters but the relevance of the information generated and the ability of the user to use the information to manage the project. It was recommended that Youth polytechnics should adopt the use of Project Management Information System in the management of their development projects.

Key Words: *project management, information systems attributes, project performance, youth polytechnic, development projects, Embu County, Kenya*

INTRODUCTION

In the project management literature, the definition of project has been discussed by numerous literatures, for instance, Project Management Institute (2008) define projects as a short-term endeavor undertaken to create a unique product or service. Cleland (2004) describe a project as a combination of organizational resources pulled together to create something that did not previously exist and that will provide a performance capability in the design and execution of organizational strategies. Some authors describe Project Management information systems as software for project management (Fox, Murray et al., 2003), while others view them as orderly procedures or practices that project managers use for producing specific project management deliverables Milosevic (2003).

Besner (2009) declared that projects are most frequently used in information technology (IT), software development, business process reorganization and research and development. The task of Project Management Information System has been described as important to the achievement of project goals and the implementation of project strategies. PMIS supplies project managers with essential information on the cost parameter, time parameter and performance parameter of a project and on the interrelationship of these parameters (Raymond, 1987). In the information technology (IT) industry, Gartner Research estimates that 75% of large IT projects managed with the support of a project management information systems will succeed, while 75% of projects without such support projects will fail (Light, et.al., 2005).

In organizations that are engaged in many projects, management is faced with challenges in resource planning, prioritization and monitoring (Elonen & Artto, 2003). Inadequate balancing of scarce resources challenge repeatedly results in additional pressure on the organization. These pressures lead to poor quality of information and a greater time to complete the project. Managers may become overwhelmed by the amount of information that is available for decision making and may not be able to identify the relevant information or realize the inaccuracy of the information. Use of Project Management Information Systems (PMIS) is considered to be beneficial to project managers because of the supposed contribution regarding timelier decision making and project success (Raymond & Bergeron, 2008). Studies on the use of PMIS in single projects show that there are several important factors that drive project managers to use PMIS (Ali & Money, 2005). Whether or not project

managers will use PMIS strongly depends on the quality of the information generated by the PMIS (Ali & Money, 2005).

However, literature still shows that researches on the utilization of Project Management Information System that highlight the demographics of project management tools and, to assessing particular functions of these tools to maintain a particular tasks during project management life cycle such as planning, communicating and reporting, managing risks, scheduling, estimating costs, and managing documents needs further research (Herroelen, 2005; Love and Irani (2003). According to Ahleman (2009) Project Management Information Systems have become inclusive systems that support the project's entire life-cycle. To support project managers in their planning, organizing, control, reporting and decision making tasks on the one hand and evaluating and reporting, it seems to be essential to make use of PMIS (project management information system). As part of the project management system, the PMIS (project management information system) are a means for the project managers to be supported in their decision making. The function of the PMIS can be seen as the link between the multi project environment and the project managers that is capturing, storing and processing project data to assist the project managers in their decision making responsibilities (Raymond, 1987).

Ali, Anbari, and Money (2008) argue that Information systems are developed using Information technology to assist people in performing their tasks. Project Management Information System is an example of these Information Systems and is widely regarded as an important building block in project management. These systems have continued to evolve from just being planning, scheduling and resource management information systems to complex, distributed, multi-functional systems that can easily generate information necessary to make decisions, improve the efficiency of implementation among other functions within life cycle of the project. What sets Project Management Information System apart from other classes of information system is the volatility nature of their usage, context that is project environments, and as such they need to be more customizable in their functionality than most other enterprise information systems (Ali et al, 2008).

The rate of information systems development project failure in the 1980s and 1990s was routinely documented to be above 50%, the larger the development project the more likely it was unsuccessful (Simpl & Nzier, 2000). A 1994 study of IS development projects in British public sector estimated that 20% of expenditure were wasted, and a further 30% to 40% did not produce perceivable benefits (Wilcocks, 1994). Also in 1994, the U.S.A. general accounting office reported that spending of more than US$200 billion in the previous twelve years had led to few meaningful returns. A 1995 study of over 8,000 Information systems projects by Johnson revealed that only 16% were finished on time and within budget (Johnson, 1995).

The U.S.A. internal revenue service, with an annual computer budget of US$8 billion, managed a string of project failures that have cost taxpayers $50 billion a year (James, 1999). Collins and Bicknell (1997) estimated that public sector failures in the United Kingdom cost £5 billion. The Wessex Health Authority's regional information systems plan was cancelled

after more than £43 billion had already been spent, with little achieved (Collins et al, 1997). A study by Simpl & Nzier (2000) found that the success rate was only 55% for projects under US$750,000; however, for those with budgets over US$10 million, no projects were successful. In 2002, the United Kingdom's National Health Service initiated the largest-ever public sector project at an estimated cost of £11 billion. This led to the introduction of new information systems in almost every hospital, but it was still considered a failure (Rainer & Turban, 2009).

The success of the management information systems can be achieved by analyzing its effect on results. Various authors consent with this concept and directly affirm that the goal of management information systems should be to obtain an improvement and enhancement in the firm's performance. According to a study conducted by (Naranjo-Gil 2009), Management information system has an influence on flexibility-based strategic performance and cost-based strategic performance, considering the decentralization of responsibilities, updating customer knowledge and customer participation in management, the cooperation with other units with the scope of increasing the firm budget, actualization and use of management information (Slotegraaf & Pauwels, 2008). Greater management information system capability leads to a higher degree of project performance.

According to Lai et. al. (2004) a link was established between sharing environmental management information with customers and suppliers and the overall comprehensive firm performance. PMIS enhances the quality of organizations by providing appropriate information for quality decision making. Due to the expansion and complexity of organizations, managers have lost personal contact with the scene of operations. PMIS also changes the bigger amount of data into compiled form and thereby avoids the possible ambiguity that may arise when managers are swamped with detailed facts. MIS is successfully used for measuring organizational performance and making a necessary change in its plans and procedures (Pfeffer and Sutton, 2000). MIS links all decision centers in the organization, by facilitating the integration of specialized activities by retaining each department conscious of the requirements and issues of other departments (Jorgenson, 1989).

Management information system serves as a connection between managerial planning and control and assembles, processes, stores, retrieves, evaluates and distributes the information. It improves the capacity of management to analyze, assess and improve comprehensive organization performance. PMISs have capabilities that help project managers in planning, budgeting and resource allocation. In addition, many PMISs perform assorted analyses like variance, performance, and forecasting for any level of the WBS and project organization. A good PMIS (project management information system) allows facile control of changes to system configuration and project plans. These PMISs allow for quick review and easy periodic updating; they filter and reduce data to provide information on summary, exception, or what if bases. With an effective PMIS (project management information system) the project manager need not wait for days or peruse through reams of data to identify problems and determine project status (Slotegraaf & Pauwels, 2008).

March and Sutton (1997) found that of 439 articles in the Strategic Management Journal, the Academy of Management Journal and Administrative Science Quarterly over a period of three years, 23% included some measure of performance as a dependent variable. Not only does the use of these systems give the firms competitive edge against their competitors but also enhances the effectiveness of development projects throughout their life cycle. According to (Kaiser et al, (2010) the use of Project Management Information System is based on the belief that their cost will be offset by the benefits that come along with it. The broadening of Project Management Information System scope assists organizations to not only manages individual projects but the whole project portfolios.

Organizational effectiveness is a broader construct that captures organizational performance, but with grounding in organizational theory that entertains alternate performance goals (Cameron & Whetten 1983). Management research in general, and research on strategic management more specifically, has taken a much more limited empirical view, emphasizing the major role of accounting, financial and stock-market outcomes. A project, in project management literature is defined as a special task that has not been done before and that achieves a clear objective against a time scale (Atkinson, 1999; Dvir, Raz, & Shenhar, 2003). Because it is very difficult to know exactly the scope as well as the complexity of all the activities that require to be carried out to complete the project at the start of a project, it is suggested that project management is a combination of management and planning and the management of change (Atkinson, 1999).

According to Ahleman (2009) "Project management covers all project management processes that are related to planning, controlling, and coordinating projects". Project management is definitely not easy in regards to the complexity, uncertainties and large number of activities involved, even in a single project environment (Mota, de Almeida, & Alencar, 2009). In a multi project environment it is common that one project manager leads multiple concurrent projects (Patanakul & Milosevic, 2008a). This implies that multi project managers have to deal with several projects at the same time. In order to be successful, multi project managers must possess more competencies for example organizational experience, Inter dependency management, multitasking, simultaneous team management, and management of inter project process and utilize them more intensely and more dynamically compared to single project managers (Patanakul & Milosevic, 2008b).

STATEMENT OF THE PROBLEM

Development projects are commonly recognized as successful when they are concluded on time, within budget, and in line with specifications and to stakeholders' satisfaction. Many of projects exceed the original cost; get cancelled prior to completion, while others fail on terms of the delivered functionality. Whereas huge amounts of time and resources are devoted to selecting and designing projects, it remains of supreme importance that projects be effectively managed in organizations if they are to achieve their performance objectives. A project manager simply cannot make and execute meaningful decisions without relevant and timely information (Cleland, 2004b). Projects have to be managed, that is, they require to be planned, staffed, organized, monitored, controlled, and evaluated (Liberatore 2004). To

succeed, companies must deliver projects on time, within budget and meet specifications while managing project risks. Peters (1982) identified that project management has long been considered an important characteristic of successful companies and is more than ever necessary to efficiently and effectively manage these projects and to support project managers in their decision-making. Cleland (2004b) states that project managers necessitate accurate and timely information for the management of a project. Project planning, organizational design, motivation of project stakeholders, and meaningful project reviews simply cannot be carried out without information on the project together with how it relates to the larger organizational context in which the project is found (Cleland 2004b). For instance, according to Uket Ewa (2013) on Root Causes of Project Abandonment in Tertiary Institutions in Nigeria found that the lack of articulated vision and objectives, lack of adequate planning for the project at inception, lack of adequate funds and budgetary allocation before projects are embarked upon, Inefficient and effective legal system, poor contract documentation, corruption and compromises, lack of municipal services, non release of government white papers on investigations carried out on abandonment of projects, lack of true leadership, lack of continuity and Institutions' long term strategic plans to drive the Institutions, ambiguity in contract documentations as the major causes of white elephants projects in tertiary institutions. However, with Project Management Information System being increasingly utilized by project managers in all types of industry, not much is known on the attributes of these systems that add to project performance. The commencement of the 21st century has shown little improvement in information systems development projects performance. Thus the intention of this study is to investigate the influence of Project Management Information System attributes on project performance of Youth polytechnic development projects in Embu County, Kenya with regard to the System, quality of information, the System user and the System use during the entire project life cycle to increase project performance rate.

GENERAL OBJECTIVE

The study sought to investigate the influence of Project Management Information System attributes on project performance of Youth polytechnic development projects in Embu County, Kenya.

SPECIFIC OBJECTIVES

1. To determine the influence of PMIS system software and performance of polytechnic development projects in Embu County Kenya;

2. To establish the influence of quality information generated by PMIS and performance of polytechnic development projects in Embu County Kenya;

3. To assess the influence Project Management Information System user satisfaction and performance of polytechnic development projects in Embu County Kenya;

4. To determine the influence of Project Management Information System use by the manager and performance of polytechnic development projects in Embu County Kenya.

THEORETICAL FRAMEWORK

This study is based on the concept of information system (IS) success which is widely accepted for the evaluation of information systems (Yuan et.al, 2006). In management information systems (MIS) scholarship, a wide range of research has proposed IS success models (Delone et.al, 1992 and Raymond et.al, 2008). Various studies have been carried out in which the success factors of the models are applied to the evaluation of IS success or performance.

DeLone and McLean Information Success Model (ISSM) (1992)

Delone and Mclean performed a review of the research published during the period 1981–1987, and created taxonomy of IS success based upon this review. In their 1992 paper, they identified six variables or components of IS success: system quality, information quality, use, user satisfaction, individual impact, and organizational impact (Petter et al, 1992). DeLone and McLean's model present different features differentiated by the two essential concepts that is system software quality and information quality.

DeLone and McLean (1992), introduced the first IS success model which was based on Shannon and Weaver's (1949) theory of communication. The utilizing of the system has a clear impact on the way individuals accomplish their performance. This impact may eventually effect on the organizational performance. It was among the first studies to impose some order in IS researchers' choices of success measures (Seddon et al, 1999). The model is based on theoretical and empirical research conducted by a number of researchers in the 1970's and 1980's. To construct the model, DeLone and McLean reviewed 100 papers containing empirical IS success measures published in seven publications during 1981-1987. They distilled the resulting huge range of Information system success measures into an integrated view of IS success, represented by the following the six dimensions: System Quality, Information Quality, Information Use, User Satisfaction, Individual Impact and Organizational Impact.

While the model integrates the comprehensive dependent variables used by IS researchers, it received several criticisms. Ten years later, DeLone and McLean presented an updated model reflecting the criticisms by other researchers and the situation at the time. As the service concept was added to IT with the use of the Internet, they increased the number of information system success factors to seven, including service quality, and analyzed the interdependence and correlation of these seven factors. Figure 2 represents the updated ISSM model of Delone and McLean (2003).
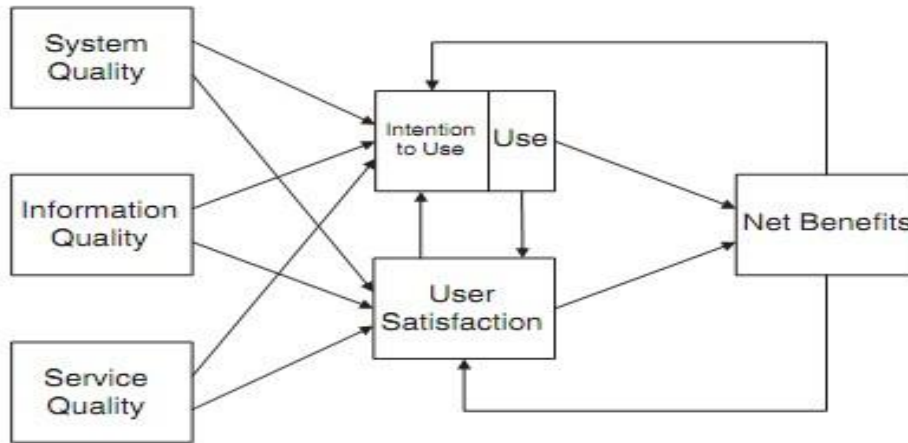
Figure1: The Updated Information System Success Model (ISSM) (DeLone, McLean 2003)

Technology acceptance model (TAM) (Davis et al, 1989)

Several studies of IS success models in the field of development projects have been carried out the technology acceptance model (TAM), (Chung et al, 2009) attempted to determine the elements of the success or failure of the introduction of enterprise resource planning (ERP) systems that are widely utilized in development projects with the purpose of contributing to assessing, planning, and conducting a project for introducing and establishing an ERP in an enterprise. In the research, the success factors of the ERP system are divided into two categories; the first category is user-related variables, including output, job relevance, image and result, demonstrability, compatibility, and system reliability. The second category is project-related variables, including internal support, function, and consultant support. It can be said that this research has a high level of completion in that it suggested a success model for development projects ERP systems through extensive data collection and empirical analysis. Nevertheless, the success model suggested has limitations in its application to other types of IS because it was verified by focusing on ERP systems. Hjelt (2007) analyzed factors related to end-users' attitudes toward Electronic Document Management (EDM) systems that are used for large-scale development projects. The research conducted a survey to draw factors that affect acceptance of an EDM system to a development project.
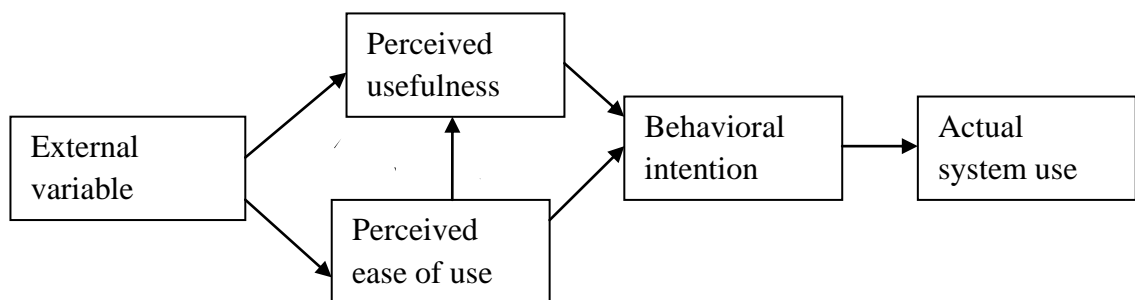

Figure 2: Technology Acceptance Model (TAM) (Davis, Bagozzis and Warshaw 1989)

This study was founded on the recurrent constructs of antecedents and consequences of IS use developed in DeLone and McLean's IS success model (ISSM) (1992), later updated (2003), and in Davis et al (1989) technology acceptance model (TAM). The ISSM incorporates information quality and system quality as antecedents of IS use, leading to individual IS impacts, that is, on users and their work (example in regard to their effectiveness), and in turn to organizational impacts (example, in regard to business strategy and performance) (Raymond, Bergeron, 2007). While the TAM explains IS use in a similar manner by the system's perceived usefulness and perceived ease as long as information systems in organizations are under development.

Project management information systems prove their position as an effective tool for achieving project success. Using PMIS to manage projects is not enough, but it is essential as it plays an important role in the success of the companies. Since human activities affect the results of information systems. So measuring the success of information systems and its impact on the success of the projects is a complex task. Project Management Institute found that, project management information systems are tools and techniques that are used to distribute all the information in projects Gorla, & Somers, & Wong (2010). Turner (2009) showed that Project management information systems create a Database that managers need for good coordination of people and activities in projects.

PMIS also should be able to review the situation that people are involved in projects. In IT industries, Hasan, & Shamsuddin, & Aziati, (2013) estimated that 75% of IT projects management have succeeded under the support of PMIS; while, 75% of projects would fail without such a support. Since the success of project is a combination of project management success and project product success use. Both the ISSM and the TAM offer widely accepted and validated representations and explanations of the IS use phenomenon. This is supported by studies done by Larsen, Lee and Rai (Larsen 2003, Lee, Kozar & Larsen 2003, Rai, Lang & Welker 2002).

RESEARCH METHODOLOGY

Research Design

The research used descriptive survey design because descriptive research does not modifying the situation under study or determining the cause-effect relationship. It also enabled the researcher to get the opinions of project managers involved in development projects in their natural setting.

Target Population

This study targeted managers, instructors, and support staffs of vocational training institutions, who are directly involved in running the affairs of youth polytechnics education in Embu. The study focused at population of 265 respondents comprising of the 143 Youth Polytechnic instructors, 32 Youth Polytechnic managers and 90 support staffs from the 32 public Youth Polytechnics in Embu County.

Sample Size

In this study, the researcher used 30% of 143 Youth Polytechnic instructors, 32 Youth Polytechnic managers and 90 support staffs from the 32 Youth polytechnics in Embu County, Kenya

Sample Selection

This study employed simple random sampling design in which each item from the target population was accorded equal chance of being selected and included in the final sample, hence ascertaining objectivity in sample selection. Random sampling technique was adopted in sample selection, in which the target population was stratified on the base of the three distinctive categories, such as managers, instructors, and support staffs.

Data Collection Instruments

Questionnaires were used to collect Data. A Likert scale was used in the questionnaire to measure attitudes presented by the respondents as recommended by Babbie (2011). The questionnaires were self-administered by use of two trained research assistants and the researcher.

Pilot Testing of the Instrument

The study selected 10% of target population to test the reliability of the research instrument. Cronbach' Alpha was used to test the internal consistency of the questionnaire. In the pilot test all constructs of the questionnaire was studied. Iriamurai youth polytechnic, Tenri vocational training centre, Nembure vocational training center and Ena vocational training center were used for pilot testing.

Validity of the Instruments

Validity is the accuracy, soundness or effectiveness with which an instrument measures what it is intended to measure. In this study, the instruments were first discussed between the researcher and the supervisor who provided his expertise and ensure that the instruments measured what they intended to measure as recommended by Kumar (2005).

Instrument Reliability

According to (Copper and Schindler 2010) reliability is the accuracy and precision of a measurement procedure. It was used to measure the degree to which a research instrument gives consistent results. A construct composite reliability co-efficient (Cronbach alpha) of 0.6 or above, for all the constructs was considered adequate for this study. The acceptable reliability coefficient was coefficient greater than $\alpha > 0.7$ and above, (Rousson, Gasser &Seifer, 2012). Cronbach Alpha was used to test the reliability of the research instrument.

Data Collection Procedure

The questionnaires were self-administered by use of two trained research assistants and the researcher. Self-administered questionnaire will enable one to elucidate the questions and probe further for more relevant information. This made it clear and yield relevant responses. To increase the response rate, an introduction letter was attached to all the questionnaires to assure the respondents of their confidentiality.

Method of Data Analysis

The completed questionnaires were edited for completeness and consistency before analyzing the responses. The study generated qualitative and quantitative data. Quantitative data was coded and entered into Statistical Packages for Social Scientists (SPSS Version 21.0) and analysed using descriptive statistics. Qualitative data was analysed based on the responses. Responses with common themes were grouped together into coherent categories. Descriptive statistics involved the application of absolute and relative (percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively). Karl Pearson's correlation was conducted to determine the relationship between the independent variables: the system software, quality of information, the system user and the system use against the dependent variable Project performance. Quantitative data was presented in tables and explanation was presented in prose.

RESEARCH FINDINGS

Correlation Analysis

The table 1 shows the correlation coefficient which described the strength and direction of the relationship between the independent and dependent variables.

Table 1: Correlation Analysis

		System software	Quality Information generated	System user	System use	Project performance
System soft ware	Pearson Correlation	1				
	Sig. (2-tailed)	.000				
Quality of Information generated	Pearson Correlation	0.595	1			
	Sig. (2-tailed)	0.00	0.00			
System user	Pearson Correlation	0.930	0.871	1		
	Sig. (2-tailed)	0.00	0.00	0.00		
System use	Pearson Correlation	0.976	0.922	0.953	1	
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	
Project performance	Pearson Correlation	0.971	0.953	0.786	0.921	1
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00

From the correlation analysis, the study found that there is a positive relationship between the project management information system and project performance, where the correlation coefficients was 0.971 and a p-value of 0.000. The study also found that the quality of information and project performance correlate positively with correlation coefficients of 0.953 and p-value of 0.000. Further the study found that there is a positive relationship between the project management information user and project performance with a correlation coefficient of 0.786 and a p-value of 0.000. Lastly, the study found that there is a positive relationship between project management information system use and project performance with a correlation coefficient of 0.921 and p-value of 0.000.

PMIS System Software and Performance

The quality of the system software has a significant impact on the acceptance of the system, its effect on the efficiency and effectiveness of the organizational performance in organizations. That's where the system that is easy to use and easy to learn will produce relevant information. The quality of the system software and accuracy of the information are considered as a key factors affecting IS acceptance and improve the organizational performance. Powerful project management software has become a prerequisite to manage the projects more efficiently and effectively, and aid the project managers in their decision-making (Havelka et.al, 2006).

Quality Information Generated by PMIS and Performance

According to AlMamary et al (2008), a number of researchers consider information quality as important factor to PMIS success in organization. This study finding showed that the quality of information is directly and strongly related to project management information system use and to the systems impacts on the project manager. Information quality is not an end by itself however, as it leads only indirectly to project performance. It is only through the actual use of the project management information system by and the systems impacts on the project manager that the quality of information can influence project performance. Cleland agrees that the best information loses its value if it's not available to people who require it to make decisions and direct actions (Cleland, 2004b).

Better quality of information results increases the opportunity of the project management information system being used, which in turn allows the system to have a positive impact on the project manager. As such, the quality of information output by the project management information system leverages the project manager's work as a professional. Ali & Money (2005) through several studies also concluded that information quality has the greatest total effect on the use of project management software. This suggests that project managers are more willing to accept Project Management Information System on the base of the quality of the information output and that they are more likely to use software that provides them with an appropriate level of details that fits their work requirements, is free of complexity, and is simple to understand and communicate with the project team.

Project Management Information System User Satisfaction and Performance

Raymond noted from his studies that among the managers who participated in the study, a large number indicated strong impacts of the Project Management Information System upon the successful close of their projects, while others did not (Raymond, Bergeron 2007). The results of this study also indicated that, in general, the low use of Project Management Information System depended upon a system of lower quality that produced lower quality information; hence they used their system less and were less supported in their project management task.

This component was measured by determining how well the project managers were able to perform various project tasks using the software and information generated by the software. According to (DeLone & McLean, 2003; Raymond &Bergeron, 2008; Seddon & Kiew, 1994) relevance, accuracy, availability, reliability, consistency and timeliness are factors related to information quality. This study also indicated the performance of the tasks were rated as either occasionally or often meaning that with the use of the software the project managers were able to reduce time required to complete task

The PMIS software on it- self does not have a direct influence on project performance, it's only through relevant information, extensive use of the system, and individual impact on the project manager that the system has an effect of project performance. Positive impact on managerial work is crucial to project performance, greater use of the PMIS does not lead parse to greater impact on project performance. It is only indirectly through it contribution to managerial work that this use contribute to project success. The system's ease of use, accessibility, learn capability and flexibility play an significant function in producing relevant, accurate and secure information as perceived by the development project manager for the accomplishment of the development projects.

Project Management Information System Use by the Manager and Performance

It is very advantageous to utilize a specialized Project Management Information System for it provides the project team and manager to use to correct amount and thus quality information (Caldwell, 2004). This study indicated the use of the various function tools i.e. planning, monitoring, Evaluation and reporting tools had led to improving the likelihood of project performance due to the quality of information generated by the PMIS. Project managers are more productive in their work since the PMIS tools enhance their capacity to perform the various tasks in their youth polytechnics.

CONCLUSIONS

PMIS must provide relevance, accurate and secure information that will enable the project team to carry out their tasks efficiently and effectively. It is not the complexity of the software that matters but the reliability and comprehensiveness of the information generated by the system and the ability of the user to use the information to manage the development projects. This information helps the users to perform their tasks in a much professional manner. When tasks are best performed project success is achieved. It is also concluded that

organizations should adopt the use of PMIS in the management of their projects. PMIS guarantees better management of project since it generates relevant information needed for the management of the project. Following the conclusions of previous research that project management information system success models should continue to be validated and challenged, the results of this research showed that the use of a project management information system is in fact advantageous to youth polytechnics development project in Embu County, Kenya.

Improvements in effectiveness and efficiency in managerial responsibilities were observed in terms of better project planning, scheduling, monitoring, controlling and reporting. Reduction of time to complete task, Improvements in productivity and better planning of activities were also observed in terms of timelier decision-making and proper budgeting. Advantages obtained from project management information system use are not limited to individual performance but also include project performance. It was also noted that the systems must provide relevant, secure and accurate information that will enable the project team to perform their tasks efficiently and effectively. The complexity of the software does not matters but the relevance of the information generated by the system and the ability of the user to use the information to manage the project. This information helps the users/ project managers to perform their tasks in a much professional manner. One can therefore conclude that project management information system make a significant contribution to project performance and should go on to be the object of project management research.

RECOMMENDATIONS

This research report recommends that since there is significant relationship between project management software, quality of information, system user and system use with regard to project performance, in development projects of youth polytechnics:

1. Ministry of education and the county government should make sure all youth polytechnics are well equipped with adequate technological facilities.

2. Youth polytechnics should adopt the use of Project Management Information System in the management of their development projects. This is because they generate, relevant, accurate and secure information needed for the effective and efficient management of the project and decision making.

3. As the research results shows the use of a project management information system is a very important attribute to PMIS Users. This is due to the fact that improvements in effectiveness and efficiency in managerial tasks were observed in terms of better project planning, scheduling, monitoring, and control. Improvements in productivity were also observed in terms of timelier decision-making. Therefore all youth polytechnics stakeholders should be involved in the procuring and installation of this system software.

4. The managers and instructors in youth polytechnics should be well qualified even up to the level of masters in order to order to ensure proper management of development projects with the available systems.

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