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REFLECTIONS ON ORGANISATIONAL LEADERSHIP ON IMPLEMENTATION OF ELECTRONIC PROJECT MONITORING INFORMATION SYSTEM IN PUBLIC TERTIARY INSTITUTIONS IN KENYA

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ABSTRACT*The principal objective of the study reported in this article was to empirically assess on the influence of organisational leadership on the implementation of Electronic Project Monitoring Information System (e-ProMIS) in Public Tertiary Institutions in Kenya. The population of the study comprised members of staff from public tertiary institutions in Kenya. A sample of 210 members of staff was selected using stratified and simple random sampling techniques. Questionnaire with both open and closed-ended items with Likert-type interval scale anchored on a five point scale was used to collect data. Descriptive statistics showthe overall mean for organisational leadership in Public Tertiary Institutions in Kenya was 2.53 and standard deviation of 0.51. The most dominant leadership style is transactional leadership (M=2.75, SD=0.66) while transformational leadership has (M=2.45, SD=0.59). Results from inferential statistics indicate that r is equal to 0.515, implying that organisational leadership has a moderately strong influence on implementation of e-ProMIS. The value of R squared is 0.296, indicating that organisational leadership explains 29.6% of the variation in the implementation of electronic project monitoring information system in public tertiary institutions in Kenya. The β coefficient of transformational leadership style is 0.315 while that of transactional leadership style is 0.360. These results indicate that transactional leadership had a stronger influence than transformational leadership on implementation of e-ProMIS. The findings for both transactional and transformational leadership styles were statistically significant with coefficients ((β=0.315, t=4.524, p=0.000<0.05) and (β=0.360, t=5.075, p=0.000<0.05) respectively. This implies that every unit change in implementation of e-ProMIS is associated with 31.5% changes in transformational leadership and 36.0% changes in transactional leadership. The overall F statistics was (2,159) =33.410 at level of significance p = 0.000<0.05 suggesting that there was a statistically significant relationship between organisational leadership and implementation of electronic project monitoring information system in public tertiary institutions in Kenya.*

Key Words: Organizational Leadership,Web-Based Project Management System, Monitoring and Evaluation

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INTRODUCTION

Organizational leadership is important for improving organizational performance and increasing the efficiency and effectiveness of organizations. The capability of leadership exists at both the individual and the collective level, which together in their sum form organizational leadership (Kivipold and Vadi, 2008). Leadership is also a property of the whole organization where collective leadership qualities are embedded in the organization's systems and structure. Studies which focus on leadership for technology reform in educational institutions have highlighted its importance not just for Information Communication Technology (ICT) implementation, but for successful ICT implementation (Seong and Ho, 2011). Fishman et al. (2002) proposed that leadership is an integral part of the successful use of technology. Anderson and Dexter (2000), based on their findings from a National Survey in the USA in 1998, found that indicators of leadership were more critical than infrastructure indicators in predicting successful ICT implementation. Organizational leadership has to be effective on thinking and understanding in order to provide a clear vision of the future. This vision must be clearly communicated to a wide range of employees who then become involved and motivated rather than directly guided. IT should be at the top of any leader's list of priorities as an organization's utilization of technology and information represents a key differentiator in the competitiveness of modern businesses.

Technological advancement of Information Technology (IT) industries and globalization has led to increased demand of project management solutions throughout the world as a fundamental force to complete projects within a defined scope, time, and within cost constraints. Most modern project systems deliver innovative solutions and its management process has the latest tools, techniques, systems, and schemes in use. One of these systems is Electronic Project Monitoring Information System (e-ProMIS), which is a Web-Based Project Management System (WPMS) introduced in the mid-1990s. WPMS is conducted through extranet, which is a private network using internet protocols to transmit information and only accessible by authorised users at different predefined levels (Nitithamyong&Skibniewski, 2011). Project data are stored on centralised servers and a standard web browser is used as a gateway to access, exchange, and share information from remote locations at any time, eliminating the problems that occur in linear communication schemes (Thorpe& Mead, 2001). Basic WPMS is typically aimed at supporting project collaboration and information sharing, but advanced WPMSs also enhance users in searching for specific information or conducting business transactions completely online.

Web-Based Project Management System has been in use in developed countries like United Kingdom (UK), Unites States of America (USA) and Sweden among others. A study conducted in UK revealed that 44 per cent of users were satisfied with WPMS experience but undecided whether to adopt WPMS on every project; 3 per cent were essentially unsure whether WPMSs are worthwhile, and 1 per cent were unsatisfied and rejected any future use (Nitithamyong and Skibniewski, 2011). AUSA-based survey also revealed that the application of WPMSs had been limited to commercial (41 per cent) and retail projects (31 per cent) (Becerik&Pollalis, 2006). In Sweden, Samuelson (2008) reported in his survey that the majority of practitioners only used WPMSs occasionally although the usage had increased considerably since the year 2010. Nitithamyong and Skibniewski (2011) observed that regardless of the proven advances in technology and the downward

trend in the price charged by providers, the slow uptake may be because of unclear understanding among practitioners on how to successfully integrate the WPMS concept in their processes. The above studies show usage of WPMS in developed countries but with varying rates of adoption.

Information available on the use of WPMS in developing countries emphasizes on its use in Asian countries. One of the countries in which it has been applied is Sri Lanka. According to a report on Institutionalization of Monitoring and Evaluation System in Sri Lanka – Lessons learnt, Best practices, Issues, Challenges and the Way Forward by Sivagnanasothy (2007), a comprehensive web-based National e-project monitoring system (ePMS) was established by the department of Foreign Aid and Budget monitoring of the Ministry of Plan Implementation which captures implementation progress as well as results of all key development projects and programmes and provides policy makers and senior officials with on-line and real time access to progress information. The ePMS which is a distinctive feature in Sri Lanka, is a home-grown user friendly, national web-based electronic on-line project monitoring system used to track the implementation progress (financial and physical) and results of all development projects and programmes (Sivagnanasothy, 2007). The World Bank evaluation mission rated the ePMS as a success story in terms of its comprehensive coverage, periodical updating, and use of information for troubleshooting. However, they noted the low level utilization of the system by sector ministries as an unexploited opportunity.

India uses a web based project monitoring system for monitoring the progress of different activities of construction projects from planning to completion phase. It has four main purpose; preparation of online monthly progress report of all projects; online monitoring of progress of all projects including their packages and all agreements drawn for a project in planning as well as in execution stage by different level of officers; generation of online mandatory letters at important stage of work (Singh, Gupta & Sharma, 2011). This is required for automatic updating of data related to project; monthly progress report can be viewed by all officers and client as well. The project monitoring system of India has programmed work in two phases: the first is online WBPMS which has details of all projects/package/sub-work and all data are to be stored in a database maintained by NIC server at New Delhi. Project registration, update of data, printing of online generated letters, progress update and progress monitoring is to be done online. The second is divisional accounting package to be maintained on desktop computer of each division where expenditure figures are to be updated (Singh, Gupta & Sharma, 2011). However, information on WPMS from these countries is in form of reports from the government and hence empirical studies seem to be lacking.

In order to address challenges of management and monitoring of government projects in Kenya, the government adopted a WPMIS known as Electronic Project Monitoring Information System (e-ProMIS) in 2009.This is an automated information management system designed to improve efficiency and transparency of national development planning and coordination of reconstruction activities within the country. Its objective is to serve as a reliable and credible source of information to support the government in effectively managing development assistance and promoting the accountable and transparent use of resources. The Electronic Project Monitoring Information System was developed by Synergy International Systems

Inc. in December 2009.In 2010 government officers were trained to spearhead implementation in the Ministries and other government institutions. However, the backend reports from e-ProMIS platform have shown that most institutions have not been updating information on their project regularly. This has caused concern in Treasury as to why institutions are not uploading project data into the monitoring system (MOEST circular, 20th March 2013 &7th April 2014). Retraining of staff on e-ProMIS conducted in February 2013 and April 2014 still does not seem to change the situation. It became necessary to carry out a study on why institutions were finding it difficult to implement the electronic based monitoring system. Probably organisational leadership could be influencing the implementation process. Researchers have discussed how to implement WPMS in developed countries (O'Brien, 2000; Ilich et al., 2006; Nitithamyong and Skibniewski, 2011). But it appeared that little attention was drawn on developing countries, especially Kenya.

Education being one of the key drivers of the social pillar of Kenya Vision 2030 has been one of the key beneficiaries of funds allocation during the national budgets. In 2013/2014 budget, the educational sector received Kshs. 273.7 billion while in 2014/2015 budget it received 139 billion. Unlike in primary and secondary schools where infrastructural development is left in the hands of the parents, in tertiary institutions these are funded by the government. This explains why tertiary institutions were targeted to implement e-ProMIS as a monitoring tool for development infrastructure. Most of the ICT related studies conducted in Kenya especially in the education sector have focussed on adoption of eLearning in universities and secondary schools. These studies have also mainly focussed on influence of variables such as staff attitude, human resource capacity, personal characteristics, school environment and availability of ICT infrastructure (Gakuu, 2006; Gakuu&Kidombo, 2010; Keiyoro, 2010; Mbwesa, 2010; Mulwa, 2012). There appears to be limited focus on the organisational factors or corporate level factors like organisational strategy and how they influence adoption and implementation of ICT based technologies.

Organizational Leadership and Implementation of e-ProMIS

The concept of leadership has generated lively interest, debate and occasional confusion as management thought has evolved (Franco and Almeida, 2011). It is not easy to define leadership, and given the complexity of the subject, there is no general consensus about delimitation of the field of analysis. Definition of leadership is related to the purpose associated with the attempt to define it, and so presents a wide range of possibilities (Franco and Almeida, 2011). Leadership can be seen as a group process, an attribute of personality, the art of inducing complaisance, an exercise of influence, a particular type of action or behavior, a form of persuasion, a power relationship, an instrument to achieve goals, the result of an interaction, a differentiated role or initiation of structure (Zacharatus et al., 2000). Leadership is associated with stimulants and incentives that motivate people to reach common objectives. According to many authors, leadership allows cooperation, diminishes conflicts, contributes to creativity and has an integrating role, as it keeps people united even when not physically so. In this way, leadership, together with stimulants and incentives, promotes people's motivation towards achieving common goals, having a relevant role in the processes of forming, transmitting and changing organizational culture (Franco and Almeida, 2011).

Examining leadership on the individual level is not sufficient at all, it is important to combine it with examining leadership on the collective level, especially on the level of the entire organization. Approaches to leadership on the collective level represent a holistic view of leadership and they differ from the traditional view of leadership that focuses on personal influence that an individual leader has on his or her followers. The epicenter of collective leadership is the coordination process that leads collective members to task success by sharing in leadership qualities between collective members. All these coordination processes are dynamic in nature. On one hand, these are processes where interactive influences among individuals make them work together as a collective; and on the other, they are processes where the collective as a social system operates and responds with respect to environmental dynamics (Kivipold and Vadi, 2008).

Leadership style has also received significant attention in literature. The most discussed has been transformational and transactional styles. The two styles have also been considered as the most relevant in team context (Bhat et al., 2012). Transformational leadership has been studied widely in the last 20 years and the positive outcomes of it cannot be denied (Kuoet al., 2010). Transformational leaders achieve these results in one or more ways: they may be charismatic to help followers (namely idealized influence), and thus inspire them (namely inspirational motivation); they may meet emotional needs of each employee (namely individualized consideration); and/or they may intellectually stimulate employees (namely intellectual stimulation). These four dimensions of transformational leadership can be summarized as follows: first idealized influence provides vision and sense of mission, instills pride, gains respect and trust. Second is inspirational motivation when communicates high expectations, uses symbols to focus efforts, and expresses important purposes in simple ways (Bass, 1990). Third is intellectual stimulation which promotes intelligence, rationality, and careful problem solving. Finally is individualized consideration which gives personal attention, treats each employee individually, coaches, and advised. The transformational leader convinces followers to adopt the organizational vision and upkeeps the confidence that they will accomplish the goals. They influence the followers as role model (Bhat et al; 2012). Kuo et al (2010) while studying the factors influencing employees' attitudes in high-tech environment observed that transformational leadership has a significant influence on the work attitudes and behaviors of followers; and is positively related to indicators of leadership effectiveness. More specifically transactional leadership is effective for short-term goals and with certain subordinates, but in a long-term perspective transformational leadership is more effective. However, this observation needs to be proved empirically. Bass (1985) commented that effective leaders use a combination of both types of leadership (transformational and transactional leadership styles). This approach was also taken by Kandie (2009) in studying SMEs in Kenya. This study will take a similar approach to establish the influence of leadership style on implementation of e-ProMIS in tertiary institutions in Kenya.

Studies on leadership in educational institutions have mainly focused on a link between leadership and school effectiveness. In most cases, outcomes in school effectiveness research have been defined as student learning outcomes and more specifically as test results. Attempts have been made to connect leadership with outcomes, usually a regression or multi-level model where different variables are regressed on pupil achievement (Muijs, 2010).

Although few studies which focus on leadership for technology reform in schools have been conducted, leadership is highlighted in the literature on technology use in schools as being key for successful ICT implementation. A study by Seong and Ho (2011) on how leadership for ICT reform is distributed within a school, found that the importance of facilitating leadership actions by senior managers in the form of setting aside time for ICT development, providing direction (vision) and engaging in transformational processes (changing culture and mindset) is crucial for ICT reform. They also emphasized the need by leaders, to provide emotional leadership by motivating staff to embark on change. Senior management and middle management could provide mutually independent transformational and transactional leadership as both types of leadership qualities are needed for ICT implementation. It is for this reason that this study sought to establish the influence of transformational and transactional leadership on implementation of e-ProMIS in tertiary education institutions.

Theoretical Foundation

In order to establish the influence of organizational leadership on implementation Figure 1 depicts the DOI process channel.

of e-ProMIS in public tertiary institutions in Kenya, an integration of diffusion of innovation theory (DOI) with change management was applied as the main theory guiding this study. The DOI model, introduced by Rogers (1995) remains a popular model in the investigation of the behavior of users in adopting new technological innovation. The DOI is a broad psychological or sociological theory used to describe the patterns of adoption, explain the mechanism and assist in predicting whether and how a new invention will be successful. Diffusion has been defined as a process in which technological innovation and managerial innovation have been introduced into work processes and adopted by a specific group or across the whole organization (Bresnen and Marshall, 2011). Innovation on the other hand, is defined as an idea, practice, or object that is perceived to be new by an individual or other unit of adoption

Tan et al., (2008) observed that diffusion of innovation theory is concerned with the manner in which new technological ideas migrate from creation to use and that technological innovation is communicated through particular channels, overtime, among the members of a social system.

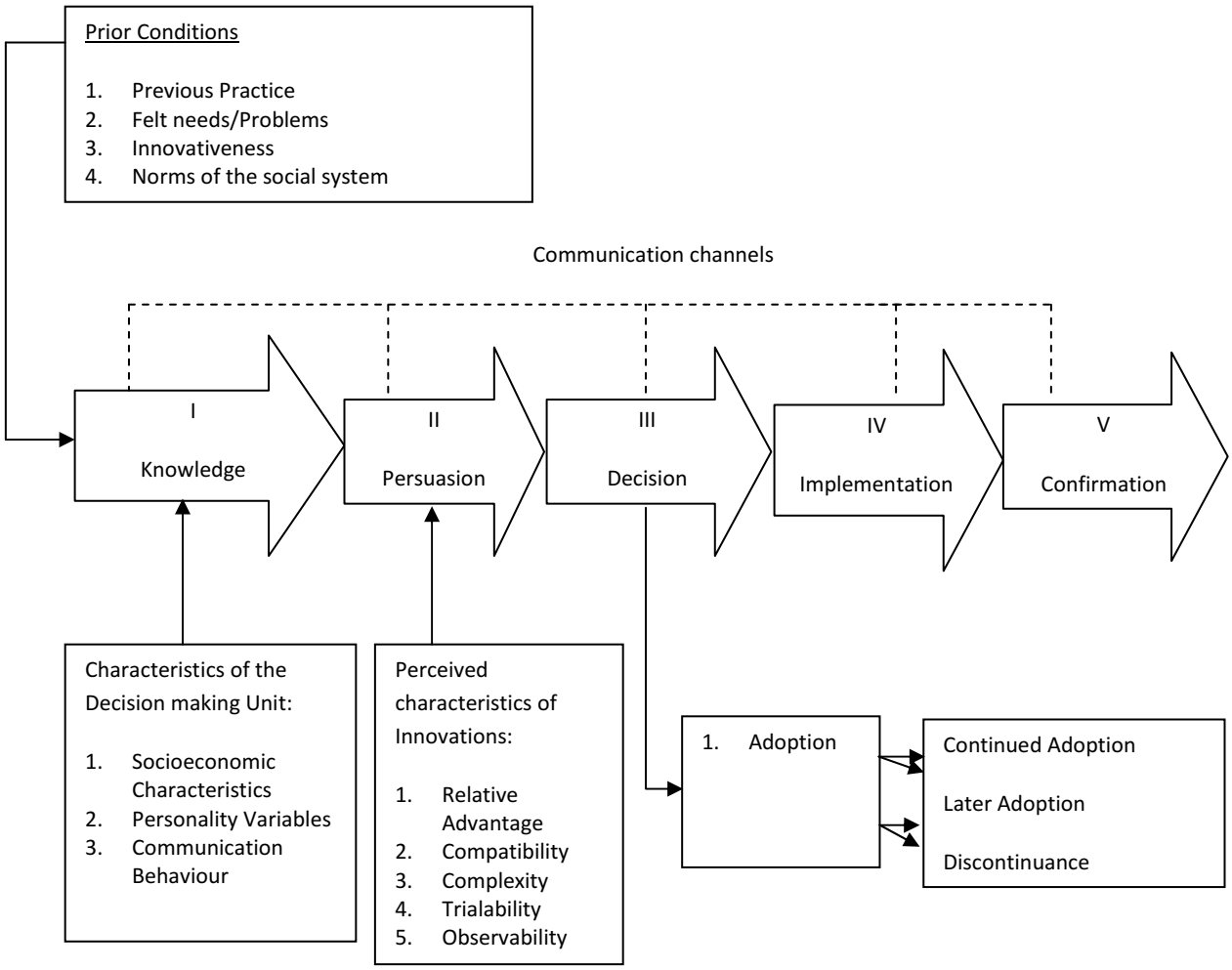

Figure 1: Diffusion of Technology Innovation Mode
Source: Rogers (1995)

Based on the DOI model, Roger (1995) proposed five important perceived characteristics of innovation. They are:

1. Relative advantage – the degree in which the innovation is perceived to be better than what it supersedes.
2. Comparability – the degree to which the innovation is consistent with existing values, past experiences and needs.
3. Complexity – the degree to which the innovation is difficult to understand and use.
4. Trialability - the degree to which the innovation can be experimented on a limited basis.
5. Observability – the degree of visibility of the new innovation results.

According to Tan et. al., (2008) many researchers have adopted this model along with its characteristics to study innovations (Behnham& Raymond, 1996); Brancheau&Wetherbe, 1990; Hussin& Noor, 2005; Kendall et. al., 2001; Limthongchai&Speece, 2003; Slyke et al., 2004 a, b, 2005 among others). In Kenya, Mulwa, (2012) applied it in her study on the influence of institutional and human factors on readiness to adopt E-learning in secondary school in Kitui district.

Considering that this study intended to research beyond adoption (which is level III

in DOI) and consider implementation (level IV of DOI), it was necessary to examine other relevant literature for better understanding. A study by Peansupap and Walker (2005) on the factors affecting ICT diffusion; a case study of three large Australian construction contractors provides invaluable information that effective ICT diffusion success could be perceived in terms of factors that influence technology adoption and the way in which successful adoption of technology by potential users within an organization could be maintained. They argue that IT innovation diffusion within an organization also requires a change management process that encourages people to adopt and use it as well as motivating people, providing appropriate training and technical support, supervisor support and open discussion issues to solve problems and resolve issues. They therefore call for integration of innovation diffusion and change management as shown in figure 2.

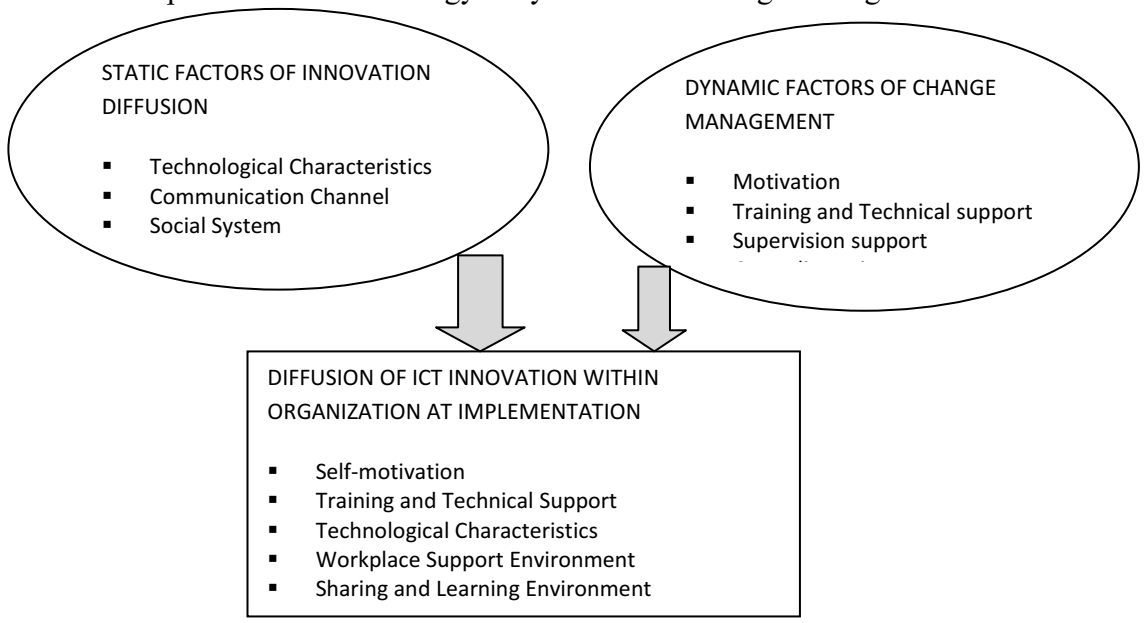

Figure 2: Integration of Diffusion of Innovation and Change management
Source: Peansupap& Walker (2005)

By applying this integration of innovation diffusion and change management as the main theory guiding this study, implementation of e-ProMIS is seen as a decision by the tertiary institutions to use the Web-based monitoring technology to communicate on the progress of their projects to stakeholders. The independent variables which are organizational leadership and dependent variable, which is implementation of e-ProMIS, are well covered in the theory as they relate to static factors of innovation diffusion and dynamic factors of change management.

Methodology

The study employed a mixed mode approach to conduct a combined cross sectional descriptive survey and correlational research design.The use of the two designs was suitable because the study used both descriptive and inferential analysis of data. The population of the study was public tertiary institutions implementing e-ProMIS which included Technical Training Institutes, Institutes of Technology and National Polytechnics in Kenya. Information from the Ministry of Education, Science and Technology showed that there were thirty five (35) tertiary institutions implementing e-ProMIS. Three members of staff from each tertiary institution who had been trained and

given passwords by the Ministry of Education, Science and Technology so as to access and upload data into the e-ProMIS system formed part of the target for this study. The study also targeted Deputy Principals, Registrars and Heads of Department. The total target population was 460 members ofstaff from the 35 tertiary institutions made up of 105 e-ProMIS trained staff and 355 deputy principals, registrars and HODs.Considering that the unit of analysis was the institution, a census of all 35 tertiary institutions implementing e-ProMIS was taken in this study because their number is small. The sample size of respondents from the tertiary institutions was calculated using the formula suggested by Krejcie and Morgan (1970), as indicated below;

$$s = x^2NP(1-P) \div d^2(N-1) + x^2P(1-P).$$

Where:
s=required sample size

x^2 =the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N= the population size

P= the population proportion (assumed to be 0.50 since it would provide the maximum sample size).

d= the degree of accuracy expressed as a proportion (0.05)

Therefore $s=3.841(460)(.50)(1-.50) \div 0.05^2(460-1)+3.841(.50)(1-.50) = 209.5671$ approximately 210respondents. This sample size corresponds with sample size given by the Krejcie and Morgan (1970) table.

The study employed a combination of stratified and simple random sampling techniques. All the three members of staff trained on e-ProMIS were sampled in the study because of their knowledge on implementation of e-ProMIS in the institutions. Considering that the tertiary institutions have almost the same number of deputy principals, registrars and heads of departments, three were sampled from each of the thirty five institutions. A sample of 210 members of staff made up of 105 e-ProMIS trained staff and 105 deputy principals and HODs was selected.

Findings and Discussion

This section presents data analysis and findings on the variables comprising of frequencies, percentages, means and standard deviations. Different set of questions measured on a five point Likert type scale ranging from 1 to 5 were used. The aggregated score are computed as the simple average of the mean score of the five dimensions. Standard deviation was also computed. Standard deviation is a measure of variation from the mean. A small standard deviation implies that most of the sample means will be near the centre (mean) and a good estimator of the population mean. On the other hand a large standard deviation illustrates that the given sample mean will be a poor estimator of the population mean for the data point are spread out over a large rate of values (Harper, 1991). Implementation of e-ProMIS was identified in this study as the dependent variable. Institutional registration on the e-ProMIS platform, uploading of projects into the e- ProMIS, frequency of uploading data into e-ProMIS, sensitization of members of staff, monitoring of implementation and internal use of e-ProMIS to generate project data were identified as indicators of implementation of e-ProMIS. Respondents were given seven items rated on a five point Likert scale ranging from: to a very great extent; to a great extent; to a moderate extent; to a little extent and to a very little extent from which to choose. The findings are presented in Table 1

.

Table 1. Implementation of e-ProMIS in Public Tertiary Institutions in Kenya

Statement	N	Min	Max	Mean	SD
Our institution is registered into the e-ProMIS platform	162	1.00	5.00	4.85	0.76
Projects constructed in our institution since 2010 have been uploaded into e-ProMIS	162	1.00	3.00	2.17	0.46
We frequently upload our projects into e-ProMIS	162	1.00	3.00	2.18	0.47
Members of staff have been sensitized on use of e-ProMIS	162	1.00	4.00	2.28	0.64
Members of staff are involved in uploading data into e-ProMIS	162	1.00	4.00	2.41	0.75
We monitor implementation of e-ProMIS in our institution	162	1.00	4.00	2.23	0.65
In our institution e-ProMIS is used to generate project reports	162	1.00	3.00	2.19	0.64
Composite implementation mean	**162**	**1.00**	**3.29**	**2.61**	**0.37**

The research findings in Table 1 show that the mean score for the seven statements used to measure implementation of e-ProMIS was 2.61 and standard deviation of 0.37. This shows that to a moderate extent public tertiary institutions have implemented e-ProMIS in the institutions. To a very great extent (M=4.85, SD=0.75) tertiary institution are registered into the e-ProMIS platform but to a very little extent (M=2.17, SD=0.46) projects constructed in the institution since 2010 have been uploaded into e-ProMIS. The findings also indicated that frequency of uploading projects into e-ProMIS was to a little extent (M=2.18, SD=0.47), sensitization of members of staff on use of e-ProMIS was done to a little extent while involvement of members of staff in uploading data into e-ProMIS was also to a little extent (M=2.41, SD=0.75). Further monitoring implementation of e-ProMIS in the institution was done to a little extent (M=2.23, SD=0.65) and internal use of e-ProMIS to generate project reports was to a little extent (M=2.19, SD=0.63). The results imply that whereas most of the public tertiary institutions are registered on the e-ProMIS platform, other indicators of implementation such as uploading data into the system, frequency of uploading and internal utilisation of e-ProMIS are indicative of low level of implementation.

Transformational Leadership Style

Transformational leadership style was measured using twenty items in the research instrument that were measured on a five point Likert scale ranging from Not at all; Rarely; Occasionally; Frequently; and Always. Respondents were requested to choose the most appropriate response to their manager's leadership style. The results are presented in Table 2.

Table 2: Means and Standard Deviations for Transformational Leadership

Statement	N	Min	Max	Mean	SD
a) Re-examines critical assumptions to ensure appropriate action	161	1.00	4.00	2.58	0.89
b) Seeks differing perspectives when solving problems	162	1.00	4.00	2.26	0.81
c) Gets me to look at problems from many different angles	162	1.00	3.00	2.20	0.71
d) Suggests new ways of looking at how we do our jobs	162	1.00	3.00	2.36	0.75
e) Talks optimistically about the future	162	1.00	3.00	2.07	0.77
f) Talks enthusiastically about what needs to the accomplished	162	1.00	3.00	2.36	0.75
g) Articulates a compelling vision of the future	161	1.00	3.00	2.46	0.77
h) Expresses his/her confidence that we will achieve our goals.	162	1.00	3.00	2.38	0.76
i) Instils pride in being associated with him/her	162	1.00	5.00	2.58	0.89
j) Goes beyond own self-interest for the good of the group.	162	1.00	5.00	2.35	0.88
k) His /her actions build my respect for him/her	162	1.00	5.00	2.33	0.80
l) Displays a sense of power and confidence	162	1.00	5.00	2.52	0.93
m) Spend time teaching and coaching us.	162	1.00	4.00	2.20	084
n) Treats me as an individual rather than just a member of a group.	162	1.00	5.00	2.44	0.85
o) Treats each of us as individuals with different needs abilities and inspirations.	162	1.00	5.00	2.52	0.87
p) Focuses on me for developing my strengths.	162	1.00	5.00	2.44	0.83
q) Talks to us about his/her most important values and beliefs	161	1.00	5.00	2.45	0.91
r) Specifies the importance of having a strong sense of purpose	162	1.00	5.00	2.69	0.88
s) Considers the moral and ethical consequences of his/her decisions	162	1.00	5.00	2.80	0.99
t) Emphasizes the importance of having a collective sense of mission	162	1.00	5.00	2.95	1.07
Composite for Transformational Leadership	**162**			**2.45**	**0.59**

The findings in Table 2 show that the leaders rarely (M=2.57, SD=0.89) re-examined critical assumptions to ensure appropriate action they and frequently (M=2.26, SD=0.81) sought differing perspectives when solving problems and rarely (M=2.20, SD=0.71) got employees to look at problems from many different angles. Additionally, respondents indicated that their leaders rarely) suggested new ways of looking at how they did their jobs(M=2.36, SD=0.75; talked optimistically about the future (M=2.07, SD=0.77); talked enthusiastically about what needs to be accomplished(M=2.36, SD=0.75); articulated a compelling vision of the future (M=2.46, SD=0.77); expressed confidence in achieving goals (M=2.38, SD=0.76); instilled pride in the staff in being associated with them(M=2.58, SD=0.89) and went beyond self-interest for the good of the group (M=2.35, SD=0.88)

Leaders in tertiary institutions rarely frequently (M=2.33, SD=0.80) their actions built respect in their employees; rarely (M=2.52, SD=0.93) displayed a sense of power and confidence, spent time teaching and coaching employees while occasionally treated them as individuals rather than just members of the group (M=2.20, SD=0.84); treated each of the individuals with different needs, abilities and inspirations (M=2.44, SD=0.88) ; focused on developing staff strength (M=2.52, SD=0.87) and talked to the staff about their most important values and beliefs(M=2.44, SD=0.83). Leaders in tertiary institutions occasionally (M=2.69, SD=0.88) specified the importance of having a strong sense of purpose; considered the moral and ethical consequences of their decisions (M=2.80, SD=0.99) and emphasized the importance of having a collective sense of mission (M=2.95, SD=1.07). Overall the research findings indicate that leaders in tertiary institutions rarely (M=2.45, SD=0.60) used transformational leadership style.

Transactional Leadership Style

Transactional leadership style was measured using eight items in the research instruments that were measured on a five point Likert scale ranging from Not at all; Rarely; Occasionally; Frequently; and Always. Respondents were requested to choose the most appropriate response to their manager's leadership style. The responses are presented in Table 3.

Table 3: Means and standard deviations of transactional leadership style

Statement	N	Min	Max	Mean	SD
a) Makes clear what I can expect to receive if any performance meets designated standards.	162	1.00	5.00	2.88	0.98
b) Expresses his/her satisfaction when I do a good job	162	1.00	5.00	2.96	0.97
c) Focuses attention on irregularities, mistakes, exception and deviations from standards.	162	1.00	5.00	2.88	0.99
d) Spends his/her time looking to put out fires	162	1.00	5.00	2.73	0.94
e) Keeps tracks of my mistakes	161	1.00	5.00	2.74	1.01
f) Directs his/her attention toward failure to meet standards	162	1.00	5.00	2.69	1.03
g) Things have to go wrong for him/her to take action.	162	1.00	5.00	2.43	1.07
h) Shows he/she is a firm believer in? if it isn't broke, don't fix it	162	1.00	5.00	2.65	1.12
Extent to which transactional leadership style was utilised				**3.17**	**1.10**

The findings in Table 3 show that the leaders in tertiary institutions occasionally (M=2.88, SD=0.98) made clear what the staff expect to receive if any performance met the designate standards; expressed their satisfaction when staff did a good job (M=2.96, SD=0.97); focussed attention on irregularities, mistakes, exceptions and deviations from standards(M=2.88, SD=1.99); spent their time looking to put out fires (M=2.73, SD=0.94); keep track of the employees mistakes (M=2.74, SD=1.01) and directed their attention toward failure to meet standards (M=2.65, SD=1.03). The findings further indicated that the leaders rarely (M=2.43, SD=1.07) things had to go wrong for them to take action while occasionally (M=2.65, SD=1.12) showed that he/she was a firm believer in "if it is not broken don't fix it". Overall the research findings indicate the leaders in tertiary institutions used transactional leadership style occasionally (M=2.75, SD=0.66).

Overall analysis on Organisational Leadership

The overall findings on the extent to which tertiary institutions utilise organisational leadership are shown in Table 4.

Table 4: Means and Standard Deviations Organisational Leadership

Type of Leadership	N	Min	Max	M	SD
a) Transformational Leadership	162	1.00	5.00	2.45	0.59
b) Transactional leadership	162	1.00	5.00	2.75	0.66
Organizational Leadership	**162**			**2.53**	**0.51**

According to findings in Table 4 the overall mean for organisational leadership in public tertiary institutions was 2.53, and standard deviation of 0.51. The most dominant leadership style was transactional leadership (M=2.75, SD=0.66) while others used transformational leadership (M=2.45, SD=0.59). This implies that transactional leadership style was being used frequently while transactional leadership was being used occasionally.

Correlational Analysis of Organisational Leadership and Implementation of e-ProMIS

Correlational analysis using Pearson's Product Moment technique was done to determine the relationship between indicators of organisational leadership and implementation of e-ProMIS. It was meant to identify the strength and direction of the association between the indicators of organisational leadership and implementation of e-ProMIS. The results are summarized in Table 5.

Table 5 Correlation Matrix for organisational Leadership and implementation of e-ProMIS

		Transformational Leadership	Transactional leadership	Composite Organizational Leadership
Implementation of e-ProMIS	Pearson Correlation	.421**	.453**	.515**
	Sig. (2-tailed	.000	.000	.000
	N	162	162	162
***. Correlation is significant at the 0.01 level (2-tailed).*				

The correlation results in Table 5 indicate positive and significant coefficients between the indicators of organisational leadership and implementation of e-ProMIS. Both transformational and transactional leadership styles had a moderate and significant relationship with implementation of e-ProMIS (r=421, p-value<0.01) and (r=453, p-value<0.01) respectively. Composite organisational leadership also had a moderate and significant relationship (r=515, p-value<0.01) with implementation of e-ProMIS.

Inferential Analysis of Organisational Leadership on Implementation of e-ProMIS in Public Tertiary Institutions in Kenya

The third objective of the study was to establish the influence of organisational leadership on implementation of Electronic Project Monitoring Information System (e-ProMIS). The literature and empirical evidence had suggested that organisational leadership would be associated with implementation of e-ProMIS. Organisational leadership was an independent variable in the study and was measured using indicators of two styles of leadership namely; transformational and transactional leadership. Data was collected using 28 items, each consisting of a statement that was measured on a five point Likert-type scale. Composite index for the two styles of leadership were computed and used in testing the hypothesis. To satisfy the third objective, the following hypothesis was tested using simple linear regression model.

Hypothesis

H_0: Organisational leadership has no significant influence on the implementation of Electronic Project Monitoring Information System in Public Tertiary Institutions in Kenya.

H_1: Organisational leadership has a significant influence on the implementation of Electronic Project Monitoring Information System in Public Tertiary Institutions in Kenya.

The null hypothesis was tested using the following linear regression model:

$y = a + \beta_3 X_3 + e$

y= Implementation of E-ProMIS

a=constant

β_3= Beta coefficient

X_3= Leadership

e= error term

The results are presented in Table 6.

Table 6: Regression Results of Influence of Organisational Leadership on implementation of e-ProMIS

Model	Unstandardized Coefficients		Standardized Coefficients	t	P-Value
	B	Std. Error	Beta		
(Constant)	1.575	.130		12.144	.000
Transformational Leadership	.197	.044	.315	4.524	.000
Transactional Leadership	.203	.039	.360	5.075	.000
Predictors: (Constant), Transformational Leadership, Transactional Leadership Dependent Variable: Implementation of e-ProMIS					
R= 0.544 **R square=0.296** **F(2,159)=33.410 at level of significance p = 0.000<0.05**					

The study findings in Table 6 indicate that r is equal to 0.544 indicating that organisational leadership has a strong influence on implementation of e-ProMIS. The value of R squared is 0.296, indicating that organisational leadership explains 29.6% of the variation in the implementation of electronic project monitoring information system in public tertiary institutions in Kenya. The β coefficient of transformational leadership style is 0.315 while that of transactional leadership style is 0.360. These results indicate that transactional leadership had a stronger influence than transformational leadership on implementation of e-ProMIS. The findings for both transactional and transformational leadership styles were statistically significant with coefficients ((β=0.315, t=4.524, p=0.000<0.05) and (β=0.360, t=5.075, p=0.000<0.05) respectively. This implies that every unit change in implementation of e-ProMIS is associated with 31.5% changes in transformational leadership and 36.0% changes in transactional leadership.

The overall F statistics was (2,159) =33.410 at level of significance p = 0.000<0.05 suggesting that there was a statistically significant relationship between organisational leadership and implementation of electronic project monitoring information system in public tertiary institutions in Kenya. Based on the research findings we reject the null hypothesis that organisational leadership has no significant influence on the implementation of Electronic Project Monitoring Information System in Public Tertiary Institutions in Kenya and conclude that organisational leadership has a statistically significant influence on the implementation of Electronic Project Monitoring Information System in Public Tertiary Institutions in Kenya.

. Using the statistical findings the regression model can be substituted as follows;

$$y= 1.575+0.315T+0.360TR$$

Where y=Implementation of e-ProMIS
T= Transformational Leadership
TR= Transformational Leadership

Transactional leadership style was found to have a higher influence than transformational leadership style on the implementation of e-ProMIS. This is confirmed by many researchers such as Kifle& Low (2009) who in their study on e-Government implementation and leadership, noted that leadership helps ensure a strong focus while directing, pushing or encouraging the public sector constituents to move forward and hasten the implementation process. They further posited that strong leadership and power is needed to settle any arising issues or conflicts during the implementation process. Effective leadership has also been pointed out by Gichoya (2005) as one of the critical factors influencing the successful implementation of ICT projects in government. The findings also support the argument of Lau (2004) that many e-government advances to date have been driven by the enthusiasm of individuals and individual agencies. He further noted that leadership is an essential ingredient of e-government in order to motivate and break down barriers to change.

Kandie (2009) reported a positive relationship between leadership and performance which mainly depends on leadership style. Although Kandie (2009) reported that transformational leadership was more prevalent than transformational leadership, results from this study are different as transactional leadership was reported to be more used than transformational leadership. The difference could be explained by the difference of institutions used in the study as Kandie (2009) focussed on Small and Medium Enterprises which are in the private sector while this study focussed on tertiary institutions which are in the public sector. Further, Ndiritu (2012) in her study on effects of principal's transformational leadership on academic performance reported that exemplary leadership has been linked to academic performance. This portrays that the strong influence of leadership on all spheres of society cannot be over emphasized. Ibua (2014) posited that organisational leadership provided significant moderating effect on empowerment and organisational performance.

Conclusion

The findings of the studyindicated that organisational leadership strongly influenced implementation of e-ProMIS. Both transformational and transactional leadership styles were found to have a strong positive influence on implementation of e-ProMIS. Therefore, it can be concluded that leaders play a significant role in ensuring implementation of e-ProMIS

Implication of the study

This paper explored the influence of organisational leadership on implementation of electronic project monitoring information system in public tertiary institutions in Kenya. The study findingsrevealed a statistically significant relationship between organisational leadership and implementation of e-ProMIS. This implies that for organisations to effectively implement e-ProMIS they need adopt the right organisational leadership. Further, leadership training is important as a communication channel to ensure support of the adoption and implementation of new technologies. The implementation of these technological innovations would be difficult without the

support of the organisational leadership.

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