EFFECT OF MONITORING AND EVALUATION TOOLS ON IMPLEMENTATION OF WIRELESS NETWORK PROJECTS IN INSTITUTIONS OF HIGHER LEARNING IN KENYA: A CASE STUDY OF JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY HALLS OF RESIDENCE

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ABSTRACT

Implementation of Wireless network projects in an Information and Communication Technology (ICT) context encompasses all the processes involved in getting a new project operating properly, making necessary changes and achieving the intended goal. This study focuses on the effect of monitoring and evaluation tools in the implementation of Wireless network implementation in institutions of higher learning in particular JKUAT. A descriptive study design was used to collect quantitative and qualitative data. The target population of this study was on all students and staff in JKUAT Halls of Residence, management, and the JKUAT, ICT technicians. Systematic Random sampling was applied. Primary data was collected by use of both closed and open ended questionnaires. Secondary data was collected form the JKUAT, ICT directorate, records office. The data collected from the field was captured using Statistical Package for Social Sciences (SPSS). The Results revealed that monitoring and evaluation contributed to working within the expected timeframe in order to achieve positive results. Assessment revealed that Wireless network project facilitated the respondents with network and internet connectivity in a positive way. In general, from the findings, the institutions can gain full benefit of the project when monitoring and evaluation facet is emphasized. Monitoring and evaluation was positively significant in the implementation of wireless network projects. A more detailed study can be conducted to establish the other factors that contribute towards the implementation of Wireless projects in institutions of higher learning.

Key Words: *Monitoring and Evaluation, Implementation of Wireless Network, Higher Learning Institutions*

INTRODUCTION

Globalization has increased the pressure on many countries' government institutions and private sectors to be more proactive in their demand from internal and external sources, for better performance and accountability, transparency, good governance in order to deliver real time results, hence organizations need a project implementation that meets its goals (Sterman, 1992). This is a challenge because designing projects is largely constrained by project conditions and performance which evolve over time globally. As a result there is slow feedback and many involving nonlinear relationships and accumulation of project progress and resources (Lyneis and Ford, 2007). The increasing rate of change to which many institutions/ organizations in the world are exposed, long with the growing complexity of projects and the environment has highlighted some weaknesses of traditional approaches during project implementation, in coping with strategic issues in ICT project implementation hence project success is a primary factor for the survival and prosperity of project implementation teams (Rodrigues, 1994).

In many Kenyan institutions today, technology compliments the idea that learning is something personal that cannot be mass produced, and that a working wireless network, help students build the confidence, curiosity, autonomy, and skill to pave their own unique learning paths in institutions of higher learning (Kariuki, 2013). Information technology which reflects and supports an economy based on knowledge and requires workers skillful in using knowledge tools is an integral part of this learning environment through connection of students, school's administrators and the community with their network resources whenever they are in the institution through implementation of wireless network affordably enough to become reality (Nair 2002). Several challenges confront the implementation of a wireless network on a University campus, but the challenge central to this topic is implementation of the wireless network.

Organizations today have increasingly become aware of the importance of project implementation management skills. This awareness in an organization is a very vital criterion in the performance of organization during successful project implementation (Rees, 2006). Provision of wireless network in institutions of higher learning is one of the main objectives of Kenya through the Commission of Higher education and ICT board.

A key determinant to implementation of Wireless Projects in Kenyan institutions is having people who are competent to handle project to the successful implementation process right from project initialization, to closure of the project. Timely follow ups should be put in consideration during, implementation of information technology projects with the aim of improving the project design and functionality, in action through the periodic assessment of a project's relevance, performance, efficiency, and impact (both expected and unexpected) in relation to stated objective through monitoring and evaluation tools (Sterman, 1992). Successful implementation of projects responds to both internal and external variables within a project environment that influence project implementation. This requires thorough investigation, identification and understanding of the variables in question (Naimoi, 2008). In institution of higher learning, indicators to factor during the wireless project implementation can be an important part of successful implementation processes, when broader wireless coverage can be identified and assessed (Barros, 2002). To fulfil the development needs of ICT projects, those involved in the design, implementation and management of IT-related projects and systems in institutions must improve their capacity to address the specific

contextual characteristics of the institution, within which their work is located (Oteyo, 2014).

JKUAT through the Information and Communication Technology (ICT) Directorate has endeavored to popularize wireless LANs. Coupled with the need to study the emerging trends in project management and their effect on project implementation (Njau, 2012), this project shall investigate the role of Project design, stakeholder engagement, and M&E tools as a major determiner for wireless network project implementation.

Statement of the problem

Despite the solutions offered by implementation of ICT infrastructure projects in institutions of higher learning, actual implementation appears to be very heavily biased towards the aspects of new technologies while paying very mild or no attention to facet that include; Monitoring and Evaluation, that emphasize on the management of the implementation processes and structures of ICT infrastructure projects (Mouna & Jean, 2014), hence leading to delayed project implementation or partially implemented projects.

The severity of minimal attention to the facet of Monitoring and Evaluation in Information and Communication Technology (ICT) environment, during implementation, may reduce chances of transformational project implementation opportunities that may include; improvement of productivity, improved relationship between staff and students and achievement of expected goals. Apparently, in most institutions of higher education in Kenya, shortfalls and challenges are experienced during implementation of ICT infrastructure projects.

Research has shown that setting and using the right Monitoring and evaluation tools that emphasize on processes and structures Maina, (2013), is one of the determinants to projects implementation. A

large gap often exists between the evidence of research studies in the widespread wireless project implementation in institutions of higher learning in particular JKUAT. In JKUAT, the implementation of the Wireless network project in the Halls of Residence was intended to facilitate ease of accessibility of the internet and the university network shared resources at the comfort of the off-campus hours. This was a good solution to improve service delivery because one of the objectives of any learning institution is to offer quality services as per the policies that exist (Kibera, 2013). Hence, understanding this facet during the structure and the processes of project life cycle and adoption can take on a form that is more likely to be successful for those that it is aiming to support. There is need to study the emerging trends in project management and their effect on project implementation with emphasis equally on set Processes and structures of project implementation such as the effect of Monitoring and evaluation tools during project implementation cycle and whether this may explain the gaps in the outcomes of the project implementation.

Objective of the study

The objective of this study was to asses the effect of monitoring and evaluation tools on implementation of wireless network Project in Kenya

Research Hypotheses

H_0: There is no significant relationship between Monitoring and Evaluation and Project Implementation.

LITERATURE REVIEW

Theoretical framework

Program Theory

The Program Theory also called a logic model or impact pathway. It is a systematic method for collecting, analyzing, and using information to answer questions about projects, policies and programs, particularly about their effectiveness and efficiency. Creating a logic model is a wonderful way to help visualize important aspects of programs, especially when preparing for monitoring and evaluation (Funnell & Rogers, 2011). The program model was founded evaluator should create a logic model with input from many different stake holders. Logic Models have 5 major components: Resources or Inputs, Activities, Outputs, Short-term outcomes, and Long-term outcomes (McLaughlin, & Jordan, 1999). Creating a logic model helps articulate the problem, the resources and capacity that are currently being used to address the problem, and the measurable outcomes from the program. In institutions of higher learning, stakeholders often want to know whether the programs and projects they are funding, implementing, voting for, receiving or objecting to are producing the intended effect (Shackman, 2012). In institutions of higher learning, a successful Wireless network project implementation, it may be assumed that implementing the project successfully will result in the improved academic performance, by improved accessibility of learning materials, facilitate research programs, by the project meeting set quality standards of implementation.

Program theory can include positive impacts and negative impacts. In project implementation, it can also show the other factors which contribute to producing impacts, such as context and other projects during monitoring and evaluation. A program theory is often developed during the planning stage of a new project, or at implementation phase of the project or after project closure (Funnell, 2005). When monitoring and evaluation is being planned, it is useful to review the program theory and revise or elaborate it. Program theory helps to focus evaluation efforts on key concerns of project implementation. As well, there may be a need to pick the right indicators from among the many available, and one can use "monitoring questions" to select the indicators that will be most helpful. The monitoring questions take the form of "What do we really need to know in order to manage grant-making directed to the achievement of this outcome (Jackson, 2013).

Monitoring and evaluation (M&E) allows ongoing learning and feedback throughout the design, planning and implementation stages of a program/ project. In an ICT context, implementation of infrastructure projects includes an assessment of results at the end as related to the original objectives set for the project but only if planned in advance (Wagner, Day, James, Kozma, Miller, Unwin, (2005). Program Theory can be used for a single evaluation, for planning cluster evaluations of different projects funded under a single program, or to bring together evidence from multiple evaluations and research (Wholey, Hatry & Newcomer, 2004). Program theory plays an important task for monitoring and evaluation is to gather enough knowledge and understanding so as to be able to predict – with some degree of confidence – how an initiative and set of activities might work in a different situation, or how it needs to be adjusted to get similar or better results through participation of the beneficiaries (Funnell & Rogers, 2011; Wess, 1998)

Program theory is very practical during implementation of WNP in institutions of higher learning in Kenya. Project implementers sometimes regard M&E as an externally driven and imposed 'policing' action with little perceived value, while policy makers try to understand 'what happened' after project completion. Both of these are common

occurrences with M&E in ICT projects (Wagner, Day, James, Kozma, Miller, Unwin, (2005). According to the researchers, recent trends have been moving more towards a participative, learning monitoring and evaluation approach with improved local ownership of M&E efforts, and greater collaboration between policy makers, implementers and learners. Program theory assist in putting sound M&E theoretical frameworks and practices in place at the inception stage of an implementation project or research exercise, rather than as an afterthought once implementation is well underway.

Funnel, (2005), Monitoring and Evaluation Program Theory aligns and defines how the M&E framework should be fully aligned with the project design or research methodology, drawing on both quantitative and qualitative data. Ongoing M&E then becomes a project output in its own right, with the added benefits of learning from past experience. In a Wireless network project implementation the outputs from a well-designed M&E framework can in turn influence the future directions that an ICT projects may take, and allow levels of flexibility and adaptability to changing circumstances (Wagner, Day, James, Kozma, Miller, Unwin, (2005). Monitoring and evaluation theory is widely used throughout the ICT industry for project design and appraisal, because it facilitates adding a time dimension, more precisely defining the elements of the project MIS, and integrating other project management tools (Crawford, 2003).

Program Theory serves several main purposes in monitoring and evaluation ICT infrastructure project implementation like wireless network project , which include; first, measurement of achievements the project, secondly documenting for reference in terms of guiding measures of project implementation, clarity, accountability and transparency in order to achieve the intended ICT project implementation goal, to avoid the crashing with time and dynamics of emerging technology aspects, by remaining focused. The usefulness of

Program theory in M&E framework can be enhanced by incorporating information about the context in which the projects operates, by defining success criteria and comparisons for judging and interpreting performance information, and by identifying sources of performance information (Funnel, 2000). Program theory will draw on the contextual approach to Wireless project implementation, which underscores the importance of monitoring and evaluation considered crucial for a better understanding of the potential effects of poor monitoring and evaluation guidelines in achieving desired institutional goals.

Conceptual Framework

Independent Variable   Dependent Variable
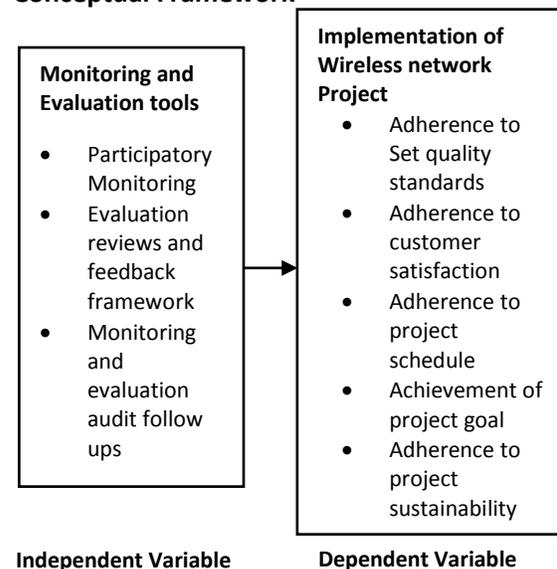
Figure 1: Conceptual Framework

Empirical Review
Monitoring and Evaluation tools

In institutions of higher learning, monitoring and evaluating is often overlooked by policy makers during project implementation (Kusek & Rist, 2004). M&E is critical in ensuring that these projects are both making the intended impact and are sustainable in the long run (Görgens-Albino & Kusek, 2009). Appropriate indicators must be identified for implementation of every ICT infrastructure project that can be monitored in

order to effectively track progress. Program theory plays an important task for monitoring and evaluation is to gather enough knowledge and understanding so as to be able to predict – with some degree of confidence – how an initiative and set of activities might work in a different situation, or how it needs to be adjusted to get similar or better results through participation of the beneficiaries (Funnell & Rogers, 2011; Weiss, 1998), hence beneficiaries at all levels must be part of this process to ensure transparency and avoid potentially corruptive practices throughout the projects(Kamau & Mohamed, 2015). While traditional Project management placed monitoring and evaluation as the last step in the project cycle, contemporary project management practices have highlighted M&E as an important aspect which should be evident throughout the lifecycle of a project implementation (Kusek & Rist, 2004). This enables the tracking of progress towards achievement of the desired goals, and demonstrates that systems are in place to support organizational continued project improvement, and adaptive management (Kamau & Mohamed, 2015).

The degree to which Participants are personally involved in monitoring of the implementation process will cause great variation in their support for the project M&E (White, Chaubey, & Costello, 2003). From increasing accountability to enhancing monitoring participation, improves understanding, increases local level capacity and sustaining partnerships between different beneficiaries. This in return, make allowances for adequate monitoring and feedback mechanisms and gives the project manager the ability to anticipate problems, to oversee corrective measures, and to ensure that no deficiencies are overlooked (Malaiarisoon, 2012). Monitoring and evaluation systems are designed to inform project management teams and client's whether implementation is going as planned and whether corrective action is needed to adjust

implementation plans. This is done by providing evidence of project outcomes and justifying project funding allocations (Kusek & Rist, 2004).

M&E cannot be successful if carried out on a whim or without clear direction during project implementation. They must follow a sound plan that addresses how the process and project will be conducted and what is to be measured. Bringing out-of-control projects under some acceptable routine is akin to firefighting, whereas conducting detailed monitoring and evaluation (Görgens-Albino & Kusek, 2009). Initial project design strongly influences the ease with which M&E is implemented and provide the evidence for building consensus between stakeholders by providing regular feedback on project performance and shows any need for 'mid-course' corrections.

In project management Audit follow ups examine and review the conformity of a project implementation activities or management activity to predetermined standards or criteria, to report on the extent of conformity and makes recommendations on improving implementation methods to increase conformity, hence, the monitoring and evaluation audit is based on Providing assurance and accountability to stakeholders (Cassidy, 2014). Learnt broad lessons through audit become applicable to other programs and projects provides recommendations for improvement of current and future projects implementation (John, Paskins, Hassell & Rowe, 2010). Scope of internal audit follow ups certify that implementation Rules and Procedures for proper implementation through accurate monitoring and evaluation of implementation activities are applied, and that possible cost-savings and organizational improvements are identified through a M&E framework that outlines the objectives, inputs, outputs and outcomes of the intended project and the indicators that will be

used to measure all these. It also outlines the assumptions that the M&E system will adopt (Cassidy, 2014).

The Auditing follow ups is essential as it makes sure the M&E framework is followed correctly and that Project implementation objectives are linked the with the processes in a timely manner. This enables the M&E expert to know what to measure and how to measure it (John, Paskins, Hassell & Rowe, 2010). These processes include amongst others; extracting lessons and best practices for the design of future projects; providing guidelines for the modification of project design; providing adequate data for the evaluation of program impact. Project sustainability is currently an extremely relevant concept worldwide in M&E. It refers to the continuation of a Project's goals, principles, and efforts to achieve desired outcomes (Baraza, 2014). It is important to document these processes in clear narrative particularly because project managers and key stakeholders often change within the life of the project. M&E are closely linked to policy-making, enabling more informed management and facilitating decision making for strategic planning (Kamau & Mohamed, 2015). Evaluations can provide a highly cost-effective way to improve the performance and impact of development polices, programs and projects especially where evaluations are conducted at the right time, with a focus on key issues of concern to managers.

Evaluation is based on both qualitative and quantative information, gathered through monitoring and from other sources. Evaluations framework look at relevance, set quality standards, effective and the appropriateness of the design plan itself. Evaluation result in a set of recommendations, which may result in mid-course corrections, project termination, or ideas for future projects (Baraza, 2014). Evaluation contribute to more effective programming and institutional

learning when organizations try to understand the reasons for success and failures and when they take lessons learned seriously (Kusek & Rist, 2004), M&E is one of the key tools in the project lifecycle, since when used effectively at all the stages of a project cycle can help to strengthen project design and implementation, and stimulate partnerships with project stakeholders for the wireless connectivity in JKUAT.

Implementation of Wireless network
There seems to be consensuses within the project management field of study in institutions of higher learning, that monitoring and evaluation is a major contributor to project success (Kamau & Mohamed, 2015). The M&E framework complements the highly summarized M&E information that is the log frame which helps in resolving any organizational or external issues involved with the project and reflecting the interests of all the beneficiaries (Kusek & Rist, 2004). At all stages of the project cycle, the M&E tools can help to strengthen project design and implementation and stimulate partnership with project stakeholders. This is because it can influence sector assistance strategy during project implementation (Kamau & Mohamed, 2015). Relevant analysis from project and policy evaluation can highlight the outcomes of previous interventions, and the strengths and weaknesses of their implementation which improve project design and use of project design tools such as the logical framework during planning results in systematic selection of indicators for monitoring project performance (Baraza, 2014).

Relevance of Literature
Several studies have been conducted on project implementation and factors that influence success during implementation (Oteyo, 2014).

In review to several studies conducted on monitoring and evaluation; according to studies

conducted by Baraza, (2014), who studied on the influence of monitoring and evaluation tools on project completion in Kenya, he suggests that project plans and stakeholder engagement significantly influence the success of project completion. Kamau and Mohamed (2015) in their paper on efficacy of monitoring and evaluation function in achieving Project Success in Kenya, the researcher points out that the strength of the M&E team, monitoring approach adopted, and project lifecycle phases and management support, are important mediating factors between M&E and the projects implementation success. A study on Making Monitoring and Evaluation tools Work, conducted by Görgens-Albino & Kusek, (2009) states that, monitoring and evaluating projects within a given institutional ICT projects is critical in ensuring that these projects are both making the intended impact and are sustainable in the long run but it is often overlooked by policy makers.

A study conducted by Görgens-Albino & Kusek, (2009) on Making Monitoring and Evaluation Systems Work have shown that M&E is critical in ensuring that these projects are both making the intended impact and are sustainable in the long run. Kusek & Rist (2004) conducted a study on Ten Steps to a Results-based Monitoring and Evaluation System and the study anlaysis show that While traditional Project management placed monitoring and evaluation as the last step in the project cycle, contemporary project management practices have highlighted M&E as an important aspect which should be evident throughout the lifecycle of a project implementation

A study conducted by Cassidy (2014) on Monitoring and Evaluation show that Auditing examine and review the conformity of a project implementation activities or management activity to predetermined standards or criteria, to report on the extent of conformity and makes recommendations on improving implementation methods to increase conformity, hence, the monitoring and evaluation audit is based on Providing assurance and accountability to stakeholders. A study carried out by John, Paskins, Hassell & Rowe, 2010 on Eight years' experience of regional audit analyses that Scope of internal audit certify that implementation Rules and Procedures for proper implementation through accurate monitoring and evaluation of implementation activities are applied, and that possible cost-savings and organizational improvements are identified through a M&E framework that outlines the objectives, inputs, outputs and outcomes of the intended project and the indicators that will be used to measure all these.

Njau (2012), in a research on factors influencing implementation of African Development Bank funded projects in the Ministry of Higher education, Science and technology in Kenya, concluded that the foundation of a successful project implementation is strongly influenced by set quality standards, project design and project schedules. The success of a project as well as the factors that affect this success are considered in a various ways by different project management scholars. There is no unified treatment and definitions of these concepts although there is a consensus about the importance of this aspect for the project management practice. In this respect, Prabhakar (2008) generalizes that the only agreement is the disagreement on the issue "what is project implementation success".

RESEARCH METHODOLOGY
The study adopted descriptive research design with JKUAT as the case study. The target population for this study consisted of JKUAT management members, the JKUAT ICT implementation technical team, staff members and students in the Halls of

residence, this totaled to 2950 people (JKUAT Human Resource Staff Records and University Dean of Students, Students Records). Addressing these questions, a statistical evaluation for sample size calculation was performed based on some statistical inference of the primary study endpoint with certain assurance. Sample size determination is one of the most important aspects (Mugenda & Mugenda, 2003). The sampling frame was made up of all staff and students in the halls of residence and JKUAT ICT Directorate wireless network implementation team. The sampling frame provided a list of cases from which a sample was selected. JKUAT is a public institution of higher learning in agriculture and technology. Purposive sampling was used to select projects and projects teams with the highest impact by a wider customer base. Stratified sampling was then used to get an inclusive sample of the population of the staff and students and random sampling was used on the respondents. Primary data was obtained through Questionnaires. Questionnaire had both open ended and closed questions. Open ended questions were to provide the opportunity for self-expression openly and honestly as well as allow the respondents to give their ideas, concerns & feelings. Secondary data, was captured from documents of the already implemented wireless network since the project was initialized in 2011 to 2013. The researcher collected both primary and secondary data. In Primary data the questionnaires were constructed using both closed ended and open ended questions so as to gather necessary data in accordance with the objectives of the research study. The questionnaires were administered to all sampled respondents in JKUAT main campus, Halls of Residence, to fill in the questionnaire. In secondary data the researcher obtained the documentation for reference from ICT Directorate JKUAT. The questionnaires underwent pre-test in a pilot study through a sample of 1-10% of randomly selected JKUAT students.

The collected data was captured into the Statistical Package for Social Scientists (SPSS) version 22 software.

FINDINGS

The research sought to find out the effect of Monitoring and evaluation in Wireless network Project implementation. A pilot study was conducted where the content validity and reliability of the questionnaires were tested. A total of 295 questionnaires were dispatched. 270 of these targeted students living in the halls of residence, 15 management, 5 non-technical staff, and 5 technical staff. A total of 283 responses were received. The response rate was therefore 95.9%. Demographically the study targeted respondents who were using wireless network or had previously participated in the implementation of a wireless network project. The respondents aged between 16-30 years and accounted for 90.1% of the respondents. 31-40 years respond accounted for 7.8%. 41-50 respondents accounted for 1.8%. 50 and above years accounted for 1%. Majority of the respondents were aged between 16-30 years, hence representing a good sample size of the target group to make decisions. Based on education level, the result showed that all respondents were educated. Doctorate accounted for 1.1%, Master's degree accounted for 3.5%, Bachelor's degree accounted for 0.7%, Diploma accounted for 17.3%, certificate accounted for 14.5% and finally 'o' level accounted for 62.9%.

Role of Monitoring and Evaluation tools

Monitoring and Evaluation enables the tracking of project implementation progress towards achievement of the desired goals, and demonstrates that systems are in place to support organizational continued project improvement, and adaptive management (Kamau & Mohamed, 2015). In this study, Monitoring and Evaluation tools such as Monitoring, Evaluation and Audit that influenced

Wireless Network project implementation were tested. A Likert scale was used and respondents were expected to give their degree of opinion on statements as shown in the table 1 below.

Table 1: Monitoring and Evaluation tools

Statement	SA	A	I	D	SD	Sum	Mean	Standard deviation
Participatory monitoring was used throughout the project lifecycle.	33	65	76	66	36	276	2.97	1.216
Appropriate evaluation reviews and reports were used throughout the project lifecycle.	25	69	76	59	45	274	2.89	1.218
Audit follow-ups were implemented during monitoring and evaluation throughout the project lifecycle.	27	66	85	64	37	279	2.94	1.177
Overall	**85**	**200**	**237**	**189**	**118**	**829**	**2.93**	**1.207**

Key: SD=strongly disagree, D=disagree, I= Indifferent, A=Agree, SA=strongly agree

The highest rated response was Participatory Monitoring at a mean of 2.97 translating to 59.4%. Audit follow ups during monitoring and evaluation followed at 58.8%. Appropriate evaluation reviews and reports at 57.8%. This implied that the monitoring and evaluation tools provided the evidence for building consensus between stakeholders by providing regular feedback and review on project performance and expectations during project implementation. This corresponds to Görgens-Albino & Kusek, (2009) who says M&E cannot be successful if carried out on a whim or without clear direction during project implementation and that, M&E must follow a sound plan that addresses how the process and project will be conducted and what is to be measured. In collaboration with Kamau & Mohamed, (2015) who says that at all stages of the project cycle, the M&E tools can help to strengthen project design and implementation and stimulate partnership with project stakeholders. This is because it can influence project sector assistance strategy during project implementation.

According to Sokol-oxman & Jersild (2015) who says participatory monitoring, include monitoring intended and/or unintended consequences, which demonstrates what has been achieved, whether the needs of the intended beneficiaries have been met, and whether the best strategies have been taken in order to achieve the project goal. In concurrency with Cassidy (2014) who says that audit follow ups certify that implementation Rules and Procedures for proper implementation through accurate monitoring and evaluation of implementation activities are applied, and that possible cost-savings and organizational improvements are identified, through a M&E framework that outlines the objectives, inputs, outputs and outcomes of the intended project and the indicators that will be used to measure all these hence outlines the assumptions that the M&E system will adopt during project implementation.

On Role played vs Participatory Monitoring, A cross tabulation was done to cross check on the effect of Participatory monitoring in relation to those who played a role during project implementation.

Table 2: Role Played vs Participatory monitoring

		Participatory Monitoring					Total
		Strongly disagree	Disagree	Indifferent	Agree	Strongly agree	
Role	Non- Technical	10	11	13	10	5	**49**
	Technician	1	2	7	5	4	**19**
	Project Manager	1	0	2	3	0	**6**
Total		**12**	**13**	**22**	**18**	**9**	**74**

The information contained in Table 2 showed that total of 74 out of the 283 respondents were involved in wireless network project implementation and played different roles. 9 of the 74 strongly agreed and 18 of the 74 agreed, participatory monitoring affected wireless network implementation. This analysis implied that there was some significance of participatory monitoring during project implementation. This concurs with White, Chaubey, & Costello (2003) who says that the degree to which Participants are personally involved in monitoring of the implementation process will cause great variation in their support for the project M&E from increasing accountability to enhancing monitoring participation, improves understanding, increases local level capacity and sustaining partnerships between different

beneficiaries. Also in collaboration with Malaiarisoon (2012) who says that Participatory monitoring, make allowances for adequate monitoring and feedback mechanisms and gives the project manager the ability to anticipate problems, to oversee corrective measures, and to ensure that no deficiencies are overlooked during project implementation. This implied that minimal Participatory monitoring could have affected wireless network implementation results.

On operating within scheduled timeframe vs audits follow up, a cross tabulation was done to cross check on effect of Monitoring and Evaluation follow up audits in relation to working within time schedule during project implementation.

Table 3: Operating within scheduled timeframe vs to follow up audits

		Monitoring and Evaluation audits follow-up					Total
		Strongly disagree	Disagree	Indifferent	Agree	Strongly agree	
Operating within scheduled Timeframe	Strongly disagree	5	3	0	0	0	**8**
	Disagree	13	9	6	0	0	**28**
	Indifferent	12	24	22	13	1	**72**
	Agree	7	18	32	26	10	**93**
	Strongly agree	0	9	24	25	16	**74**
Total		**37**	**63**	**84**	**64**	**27**	**275**

The Table 3 showed that 74 of 275 respondents strongly agreed and 93 of 275 respondents agreed

that monitoring and evaluation audits influenced operating within scheduled timeframe during

project implementation. This showed that audit follow up had significance in project implementation. This concured with (John, Paskins, Hassell & Rowe, 2010) that auditing follow ups is essential as it makes sure the M&E framework is followed correctly and that Project implementation objectives are linked the with the processes in a timely manner. This enables the M&E expert to know what to measure, how and when to measure it.

On meeting set quality standards vs Evaluation, a cross tabulation was done to cross check on the relationship between how review and feedback framework influenced meeting set quality standards during project implementation.

Table 4: Meeting quality standards vs Evaluation

		Evaluation review and feedback framework					Total
		Strongly disagree	Disagree	Indifferent	Agree	Strongly agree	
Meeting set quality standards	Strongly disagree	5	3	0	0	0	**8**
	Disagree	19	10	6	1	0	**36**
	Indifferent	14	19	13	19	1	**66**
	Agree	7	14	25	21	10	**77**
	Strongly agree	0	12	31	26	14	**83**
Total		**45**	**58**	**75**	**67**	**25**	**270**

The information contained in the Table 4 showed significance from the respondents that 83 respondents strongly agreed and 77 agreed that reviews and feedback evaluation framework influenced meeting set quality standards. This response showed there was significance between evaluation and the wireless network project implementation. This concured with Baraza (2014) who says Evaluations framework look at relevance, set quality standards, effective and the appropriateness of the design plan itself then Evaluation result in a set of recommendations, which may result in mid-course corrections, project termination, or ideas for project implementation since it is based on both qualitative and quantitative information, gathered through monitoring and from other sources. It is also in line with (Kamau & Mohamed, 2015) who says Evaluations can provide a highly cost-effective way to improve the performance during implementation and impact of development polices and standards, programs and projects especially where evaluations were conducted at the right time, with a focus on key issues of concern to managers.

Inferential Statistics

A cross tabulation was done to cross check the correlation Monitoring and Evaluation tools and Implementation of Wireless network Project.

Table 5: Monitoring and Evaluation tools vs Implementation

		Implementation						Statistics	Value (Significance)
		SD	D	I	A	SA	Total		
ꝺ ǝ ʌ ᴁ	SD	1	15	11	0	0	**27**	Chi Square	24.11 (<0.001)

D	1	11	43	10	2	**67**	Correlation	0.740 (<0.001)
I	0	0	16	62	14	**92**		
A	0	0	3	39	41	**83**		
SA	0	0	0	7	7	**14**		
Total	**2**	**26**	**73**	**118**	**64**	**283**		

The Table 5 shows that, the chi-square test of independence showed that there was a positive correlation between Monitoring and Evaluation tools and Implementation of Wireless network Project. This relationship was significant (p<0.001). This was explained in the regression summary for Monitoring and evaluation, Table 6 below.

Table 6: Regression Summary for Monitoring and Evaluation

Variables in the Model	Beta Coefficient	Std. Error	t-statistic	P-value
Constant			24.11	0.001
Monitoring and Evaluation	0.239	0.091	2.626	0.001

Correlation coefficient (R) = 0.740
Coefficient of Determination (R square) = 0.548

Table 6 shows that Monitoring and Evaluation had a p-value of 0.001 which was less than 5% or 0.05 significance level set by the researcher. Therefore, this research rejects the null hypothesis that there was no significant relationship between Monitoring and Evaluation and Project Implementation and concludes that Monitoring and Evaluation significantly and positively influences Project Implementation. It can be further observed that a marginal change in Monitoring and Evaluation leads to change in Monitoring and Evaluation by 0.239 in the same direction while holding all other factors constant.

Monitoring and Evaluation had a significant correlation with Project Implementation at 0.74. It also had a coefficient of determination of 54.8% which means that it was able to account for 54.8% of the variations in Project Implementation which had already been found to be significant by the study.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

There was no significant relationship between Monitoring and Evaluation and Project Implementation null hypothesis was rejected. There was a significant relationship between Monitoring and Evaluation and Project Implementation. The findings showed that Monitoring and Evaluation had a significant influence on project implementation.

Findings showed that audits follow ups in monitoring and evaluation can contribute to meeting set quality standards during project implementation.

Conclusion

This study greatly contributed to understanding the effect of monitoring and evaluation tools on implementation of wireless network project in JKUAT Halls of Residence. From the results, it was evident that Monitoring and evaluation tools were critical for the implementation of wireless network project in JKUAT Halls of Residence. It was concluded that continuous monitoring and evaluation over the project lifecycle can significantly

contribute to a project working within the scheduled time frame. The study also found that, audit follow ups during monitoring and evaluation can significantly contribute to meeting set quality standards during project implementation. That monitoring and evaluation of project can significantly contribute to sustainability and which is a key indicator of successful project implementation.

Recommendations

The management of institutions should institutionalise recommendations from follow up audits and feedbacks from stakeholders in order to reduce the gap between actual project implementation and the expected implementation which would otherwise bring shortcomings to the achievement of the intended project goal.

Areas for Further Research

This study found that monitoring and evaluation was able to predict a high percentage of the variations in project implementation. It was therefore recommended that further research should be done on other possible factors that affect project implementation.

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