EFFECT OF COMMUNITY ENGAGEMENT AT DIFFERENT PROJECT PHASES ON PROJECT SUSTAINABILITY IN PUBLIC UNIVERSITIES IN KENYA: A CASE STUDY OF JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

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RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF ENTREPRENEURSHIP TECHNOLOGY, LEADERSHIP AND MANAGEMENT IN THE COLLEGE OF HUMAN RESOURCE DEVELOPMENT IN THE SCHOOL OF ENTREPRENEURSHIP, PROCUREMENT AND MANAGEMENT, JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY IN PARTIAL FULFILLMENT FOR THE DEGREE OF MASTER OF SCIENCE IN PROJECT MANAGEMENT

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DECLARATION

This research project is my original work and has not been presented for any degree in any other University.

Signature …… ……

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HD317-1125/2012

This research project has been submitted for examination with my approval as University Supervisor.

Signature …… ……

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DEDICATION

I dedicate this Research Project to my wife, Beatrice Wanjiku, our children, Joel Migwi, Ivy Wanjiru and Keren Wangari for their support and encouragement throughout the duration of my studies. I also dedicate it to all who strive towards securing a future for humanity by dedicating time and resources.

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ABBREVIATIONS AND ACRONYMS

CAP	Community Action Planning
CBP	Community Based Projects
CDF	Constituency Development Fund
CIP	Community Involvement Plan
IEBC	Independent Electoral and Boundaries Commission
JKUAT	Jomo Kenyatta University of Agriculture and Technology
MIS	Management Information Systems
M & E	Monitoring and Evaluation
NGO	Non-Governmental Organization
ORID	Objective Reflection Interpretive and Decisional
PMBOK	Project Management Book of Knowledge
QA	Quality Assurance
QC	Quality Control
QI	Quality Improvement
SPSS	Statistical Package for Social Scientists
TOR	Terms of References

DEFINITION OF TERMS

Community Engagement: According to (Tiwari, Lommerse, & Smith, 2014) community engagement is the participation of the community in various aspects of the project to ensure project sustainability. The community influences the development process of the project. Participation/involvement is a process through which stakeholder's influence and share control over development initiatives, decisions and resources, which affect them. It can take different forms, ranging from information sharing and consultation methods, to mechanisms for collaboration and empowerment that give stakeholders more influence and control (Connor, 2009)

Planning: Planning involves stating how to complete a project within a certain timeframe, usually with defined stages and with designated resources (Ochieng & Owuor, 2013).

Project Implementation: Project implementation is the phase where visions and plans become reality. This is the logical conclusion, after evaluating, deciding, visioning, planning, applying for funds and finding the financial resources of a project (Kusek & Rist, 2004).

Monitoring: Monitoring is the continuous assessment of a project from its beginning to the end to make sure that various milestones are achieved as projected and if not remedies are sought early enough (Kuei & Lu, 2013)

Evaluation: Project evaluation is a systematic and objective assessment of an ongoing or completed project. The aim is to determine the relevance and level of achievement of project objectives, development effectiveness, efficiency, impact and sustainability (Kaufman, Rojas, & Mayer, 1993)

Sustainability: Sustainability is the characteristic of process or state that can be maintained indefinitely (Birksted, 2004). In this study, it refers to maintenance and usability of projects for a longer or specified period with minimal costs incurred and has significant benefit to the community.

ABSTRACT

The main objective of this study was to assess the effects of community engagement at different project phases on projects sustainability. To achieve this, the study specifically investigated the effect of engaging the community during the planning, implementation and monitoring and evaluation phases of project management towards achieving sustainability. Data was collected from 200 different people who have been involved with JKUAT sponsored community projects. This represented 10% of the entire population. Case study research design was applied. Simple random sampling procedure was used to pick the samples from each strata. The researcher sampled 10% of the target population, giving a sample of 200. Primary data was collected using self-administered questionnaire while secondary data was collected from JKUAT's annual reports, journals, books, researches, thesis, dissertations, articles, working papers, and the internet. Data was collected by drop and pick method. The questionnaire were evaluated for content validity and reliability. Data analysis involved cleaning data and identifying common themes from the respondents' description of their experiences. Data collected was then coded, tested for completeness and analyzed. Frequency counts of the responses were obtained to generate information about the respondents and to illustrate the general trend of findings on the various variables that were under investigation. Data presentation was done using Statistical Package for Social Sciences (SPSS) software. This was in the form of tables, graphs and charts whereas qualitative findings were presented thematically. From the findings, it can be deduced that the community was not fully involved in all the stages of projects development. In the project planning phase, the respondents indicated minimal involvement where a majority of the respondents disagreed in community engagement in the identification of community based projects. In the project implementation stage, majority of the respondents disagreed on involvement of the community in the coordination of the project activities. The findings also indicated lack of community engagement in the evaluation and monitoring stage which was evidenced by the fact that most of the respondents disagreed that the community formed the evaluation team and helped develop the performance indicators. The study concluded that sustainability has neither been mainstreamed nor prioritized in each phase. It was recommended that there is need for community members to identify their own needs, analyze the factors that lead to the needs, and draw up community action plans and schedules to address the needs. The study also recommended that before the implementing parties commence on the project, there should be exhaustive and detailed approach to mainstream and prioritize project sustainability in all the phases with specific steps deliberately taken to entrench long-term project benefits

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

According to Tiwari *et al*., (2014), community engagement involves the involvement of individuals and communities in decisions about things that affect their lives. It entails open discussions and working with and not for people. People shall participate and contribute significantly to something they feel part of, identify with, and correlate with their efforts, Häkkinen & Belloni, (2011). Mobey and Parker, (2002) argues that to increase the chances of a project success, it is necessary for the organization to understand the critical success factors, to systematically and quantitatively assess these vital factors, anticipating possible effects, and then select appropriate methods of handling them. Once identified, the success of the project can be achieved.

According to Jacob *et al* (2015), community engagement is the participation of the community in various aspects of the project to ensure project sustainability. The process is significant due to its ability to identify overlooked local knowledge, streamline efforts and gain acceptance, Muraguri, (2011). Community members who contribute to the revitalization planning process will understand well the process and will be more likely to support a project they had involvement in, thus creating a sustainable project. Community engagement provides an environment for residents to become informed about project affairs and to be actively involved in making decisions that ultimately affect their community, Witkin, (2004). Meaningful community engagement is beneficial in several ways, Hamdi & Goethert, (1997): Improves information flow; improves community understanding of local Government; allows for community advocacy; fosters collaboration; minimizes conflicts;

may promote environmental justice. According to Kusek and Rist (2004), community engagement in the planning process, project implementation and continuous monitoring and evaluation are critical since adjustments and improvements to interventions can only be made by identifying strengths and weaknesses in their implementation. Engaging the community leads to capacity building that enables the community to be more effective and efficient in the process of identifying, implementing, monitoring and evaluating of projects, David (2007).

According to Botes and Rensburg (2000), community development project starts with the identification of a need or the realization that there is a need. Project planning involves setting goals, deciding what the project entails, Kerzner (2013). According to David (2007), people who get what they want do so because they have clear goals and develop plans and schedules to achieve the goals. They assume personal responsibility for implementing these plans. Simon (2009) stated in the Journal of Community Engagement and Scholarship that project implementation involves a number of activities. The community, as the beneficiaries, must be involved in the sequencing and ultimate implementation of the project Orodho (2003).

Some project sponsors tie down their participation by the level the community has been engaged. In his research in the United States, Kizlik, (2010), asserts that Federal Brownfield grant monies are tied to community involvement - without implementing and documenting the community involvement initiative - no monies will be allocated, Kizlik (2010)

Community engagement in the planning process and continuous monitoring and evaluation are critical since adjustments and improvements to interventions can only be made by identifying strengths and weaknesses in their implementation, Connor (2009). Hasna (2012) argues that one of the crucial design principles in programs and projects is that local communities must play a key role in the identification of development activities. This coincides with sentiments in McDowell (1996) that communities should be able to provide free and informed consent before any development project is initiated.

Monitoring and evaluation makes use of information gathered to assess the status of projects at any given time, and serve as a basis for reviewing and revising project plans, making sound decisions, and meeting donor funding requirements. Participatory monitoring and evaluation provides an opportunity for development projects to focus better on their ultimate goal of improving poor people's lives by broadening involvement in identifying and analyzing change, a clearer picture can be gained of what is really happening on the ground.

When local communities participate in the design and implementation of a project, they are more likely to understand and support the changes brought about by the project. This in turn reduces risks and costs for the proponent, Mobey & Parker (2002). Engaging community members and organizations enhances understanding of the target population and help in identifying the best way to meet the community needs, Altschuld & Kumar (2010). Many development projects are the beginning of an entire community renewal. The long-term benefits of these projects include the creation of more jobs, improvement in community relations, community empowerment, heightened economic

status, environmental restoration and enhancement of the quality of life in the neighborhood through environmental assessment, Kaufman *et al*., (1993).

According to Witkin, 2004), community engagement is a very significant aspect of revitalization for any community, no matter what size and without community buy-in; a project may never take off or will not be accepted once it is completed. Community assessment helps project manager to get information about a community, which can be useful in sustainability of the project. Once the community assessment has been completed, a strategic plan can be developed to analyze all resources, assets, and planning efforts, to consider the community's vision and to set forth a path toward revitalization, Altschuld & Kumar, (2010).

Sustainability is the continuing of project benefits beyond the project period, and the continuation of local action stimulated by the project, and the generation of successor services and initiatives as a result of project-built local capacity (Silvius, Köhler, Schipper, & Planko, 2012).

According to Ochieng and Owuor (2013), project is considered sustainable in the short term when the project activities and benefits continued at least 3 years after the life of the project. Sustainability at the community level entails a feasible production system that satisfies both economic and social needs. Among project participants, sustainability is coalesced around continued production gains and increased income streams resulting from project initiatives (Ojwang & Bwisa, 2014).

For sustainable development to be realized, the community must play a role. Sustainable projects should be defined by the community, to represent an ongoing process of self-realization and empowerment. Without the community becoming both the architects and engineers of the concept, sustainability of the project may not be achieved since the community is unlikely to take responsibility for something they do not own themselves (Kuei & Lu, 2013).

1.2 Statement of the Problem

Williams, (2003) observes that failure by communities and other stakeholders to take up ownership of projects have plunged community projects into immense financial huddles threatening their sustainability. According to Gilchrist (2009), an important factor for the sustainability of projects is the genuine involvement of local people as active participants and equal partners whose concerns and experience are intrinsic to the project's success. Project sustainability has been elusive as there are indications on minimal community engagement at low levels of the project phases. Projects executed by JKUAT have achieved little in terms of sustainability and longevity as the proponent has done little to make sustainability a priority at all levels of the project life. Stalling of projects at either inception or midway is a clear indictment to the non-inclusion and little consultation with the community at each level.

The level of community support determines whether a project becomes established, how quickly and successfully it consolidates, and how it responds and adapts to meet changing needs (USAID, 2009). It is therefore important that involving local communities, starts at the planning stage, when decisions are being made about what type of project is required. However, this has not been the case in major community based projects undertaken by Jomo Kenyatta University of Agriculture and Technology where only the elite in the community are involved in planning and implementation and running of such projects.

The Juja Sewerage and Biogas project where the community owned shares and the security perimeter wall project for example, were a failure on all project phases and sustainability due to complete lack of community engagement. Sustainable community development requires that local economic development support community life, using the local talents and resources of the local community. However, this is not always the case. Projects spiral downwards once the sponsor withdraws. The non-sustainability of most projects is due to application of non-engaging approaches that began by considering the community as 'beneficiaries' rather than 'participants' (Carter *et al*.1993).

This study therefore sought to establish what effect community engagement has on sustainability of projects in the different project phases in Public Universities with focus on Jomo Kenyatta University of Agriculture and Technology whose two major community based projects have stalled to date.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to establish the effect of community engagement at different project phases on project sustainability in public Universities with focus on JKUAT.

1.3.2 Specific Objectives

The study was guided by the following specific objectives;

1. To determine the effect of community engagement in the planning phase and how that affects projects sustainability at JKUAT.

2. To find out the effect of community engagement in the implementation phase and how that affects projects sustainability at JKUAT.
3. To establish the effect of community engagement in the monitoring and evaluation phase and how that affects projects sustainability.

1.4 Research Questions

The study sought to answer the following research questions;

1. How does community engagement in the planning phase affect project sustainability?
2. What is the influence of community engagement in the implementation phase on project sustainability?
3. What is the effect of community engagement in the monitoring and evaluation phase on project sustainability?

1.5 Significance of the Study

The findings of this study may be important in many ways. It may help inform policy debate on engagement-sustainability nexus and add to the literature on the subject of community engagement and project sustainability. To JKUAT managers, the research and policy implications thereof shall be of significance in as far as enhancing community engagement is concerned. This study may also point to areas that JKUAT and the community partners should improve on in line with their commitments on effective community engagement.

Project managers may be made aware of the importance of involving the community in the planning of their projects. The frequency with which community based projects fail may be reduced as the project management may learn the importance of engaging the community in projects. Higher learning institutions in Kenya may use this research to undertake meaningful

engagement with their respective local communities towards achieving successful sustainable projects. JKUAT may also apply this research to avoid the pitfall of failed projects due to inadequate engagement with its community. Finally, this research may benefit other researchers in the same field with new insight to support their arguments and hence improve knowledge base.

1.6 Scope of the Study

The study focused on projects undertaken by Jomo Kenyatta University of Agriculture and Technology together with and to benefit its local community within Juja urban area. JKUAT was chosen for this study because it has a vibrant relationship with the community and has executed a number of projects over the years. JKUAT also has a fully-fledged department that is tasked with engaging with the community on the said projects. Project managers and members of the community were also within the scope of this study as they are active participant in this projects and they hold data valuable to this study.

1.7. Limitation of the study

Key limitations of the study included limited time and resources for actual field study where the researcher was required to get in touch with the community members to administer the questionnaires. To counter this, the researcher was obliged to seek the help of research assistants to aid in data collection. Securing appointment from the selected respondents also proved troublesome. To solve this problem, the researcher booked appointments early enough and made a follow up. Primary data collection was the main source of obtaining the relevant information. However, not all respondents were comfortable with providing information, as they were unsure on the use of the information that they provided. To counter this, the researcher assured the respondents that the information sought would be used for academic purposes and that utmost confidentiality would be assured to them. Other respondents found it difficult to take time off their busy work schedules as

they viewed the researcher taking up too much of their valuable time. The researcher addressed this challenge by taking minimum time administering questionnaires.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter outlines the theoretical framework, empirical review on community engagement and sustainable projects, conceptual framework and the knowledge gap. The various related literature on community engagement and how it affects project sustainability, together with related past studies done and their various gaps are critically analyzed.

2.2 Theoretical Framework

The study considered theories related to community engagement and sustainability of projects. The theories that used are Need Chain Theory, Freire's theory and Community Action Planning Theory.

2.2.1 Need Chain Theory

According to Randy (2005), Need Chain Theory has also four vertical factors that should be considered and they include: Organizational need (needs that usually pertain to behavior or tangible outcomes, such as market share or sales targets); individual needs (needs that usually pertain to the individual's attitudes about the organization or himself, such as job satisfaction); causes and level of objectivity for all needs (the objectivity level requires all needs to contain a certain level of objectivity and to be based on deep investigation or further analysis).

The Need Chain Theory provides tools that assist organizations in prioritizing resources and identifying areas that require improvement (Mangin, 1991). The major types of needs that must be taken into consideration, for example, for determining the organization's goals and the instrument needs with full understanding of the unconscious needs while a different factor determines the objectivity level.

A Need Chain Theory is a basis that allows a development project to consider the individual needs within a community as well as the projects stakeholders and community needs simultaneously in order to come up with solutions to prioritizing resources and areas of improvement for the project (Cornwall, & Gaventa, 2011). Project planning includes needs analysis, projects requests and objective analysis. Once the project has completed the theory, it gives them a better picture of the project's priorities in a timely manner. One of the roles of this theory is that it can be used to help decision makers in project quickly come to solutions to priorities that may change over time.

The need-based theory is applied on projects to ensure sustainability. (Singh, 2008) argued that in order to conduct a needs chain theory, the project must identify Instrument needs, performance needs, conscious and unconscious needs on the organizational, project level and the individual level. In this regard, the organizational and project level applies to behavior or outcomes, whereas the individual level pertains to individual attitudes to things such as job performance or how they view the organization or projects.

Need Chain Theory is applicable in this study specifically during project, implementation and monitoring and evaluation. It is applied in determining the need of the community, a prime pillar in project sustainability. A community needs assessment is a blend of community

engagement, information gathering and focused action with the aim of community improvement. It also identifies the strengths and weaknesses (needs) within a community. Community leaders, local government, advocacy groups, project team or a combination of these then address these identified needs through policy change or project development.

2.2.2 Freirean Theory of Dialogue and Society

The Paolo Freire's theory of dialogue states that dialogue, particularly between leaders and community, is essential to liberation and education of the masses by challenging historically held methods via the use of critical thought (Freire, 1997). Critical thought raises consciousness and queries the assumption that people should fall into established routines or systems, rather than help to form new systems that had better address their needs especially concerning projects intended to better their lives. This highlighting on conscious, collaborative action gives power to community members inspired to redefine aspects of their cognitive systems. Whether by negligence, lack of budget, lack of motivation, or simple ignorance, there are disparities in implementation of community-based projects.

Freire's emphasis on dialogue is reflected in this project for community engagement with the development and management of projects in order to ensure continuity and provision of basic amenities even after phase out. Community members deserve not only to be part of the project planning and project implementation, but also to be explicitly invited to that process and thus get involved in the solutions and in monitoring and evaluation. Additionally, information about these mechanisms must be presented in accessible language, and with appropriate context. This theory serves as a bridge from the inaccessible and often intimidating language of development agencies to the people.

2.2.3 Community Action Planning (CAP) Theory

Community Action Planning (CAP) Theory was developed by (Hamdi & Goethert, 1997) and focus on who participates in projects and at what level. Effective development plans must clearly state those who will participate since inviting every person is difficult to manage, hence it is better to design a strategy that will ensure a fair representation of everyone (Kuei & Lu, 2013). The central claim of the theory is that communities and their groups should be responsible for the initiation, planning, design, implementation and maintenance of development projects in their environments.

The Community Action Planning (CAP) is a 5-step, community-driven theory designed to build communities' capacity to address disparities through mobilization. Fundamental to the theory is a critical analysis identifying the underlying social, economic, and environmental forces that create inequities in a community. The goal is to provide communities with the framework necessary to acquire the skills and resources to plan, implement, and evaluate project actions and guidelines.

Community engagement serves as a framework that explains that residences of a community must be made to participate in any development project in their environment. As community residents know their problems more than any other outside consultant or government. Therefore, getting their input and having them to help decide the design of the project brings a sense of ownership and success of the project (Bank & Fund, 2014). According to (Hamdi & Goethert, 1997) the new realism of development requires a new definition of public responsibility and a new role for development practitioners. By moving away from the orthodox trend where consultants plan, politicians decide and the people receive towards a trend that promote community empowerment; involving people who are directly affected by the development project; and promoting the appropriate technologies in the planning process (Hamdi & Goethert, 1997).

There is need for direct communication with community residence in identifying community needs and in planning a project for execution. (Hamdi & Goethert, 1997) argued that the planning team should undertake a direct observation by looking, listening and talking. Care must be taken to ensure that various interests in the community are represented. Communication plays an integral role in project sustainability. The project manager is charged with guiding all aspects of the project, including the communication plan with method and frequency as specifics.

2.3 Conceptual Framework

In the study, the conceptual framework was based on community engagement during the Project planning, implementation and monitoring and evaluation phases as the independent variable in the study. On the other hand, the dependent variable was project sustainability of community based projects in JKUAT.

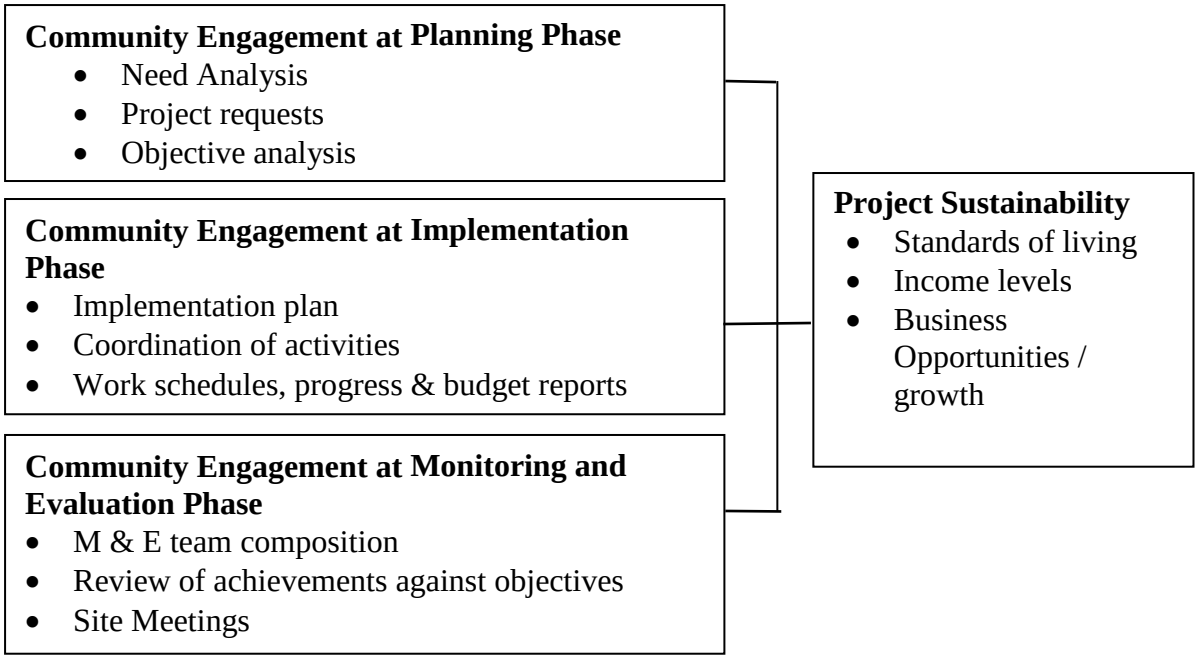

Figure 2.1. Conceptual Framework

2.3.1 Review of variables

According to Swanepoel and Beer (2006), community development project starts with need analysis that is the identification of a need or the realization that there is a need. Project planning involves setting goals, deciding what the project entails (Tang, Ahmad, Ahmed, & Lu, 2004). According to Desouza (2013), people who get what they want do so because they have clear goals and develop plans and schedules to achieve the goals. They assume personal responsibility for implementing these plans. Goals give directions to what one is involved in goals promote enthusiasm. Inherent in any goal setting is some level of efforts required to achieve it. Simon (2009) consented that setting individual and collective goals in class would imply that one is aware of the way; hence, it is easier to go the way that leads to performance.

Needs assessment is an effective tool to clarify problems and identify appropriate interventions or solutions within a community (Lee & Reeves, 2009). They added that by clearly identifying the problem, finite resources could be directed towards developing and implementing a feasible and applicable solution. Gathering appropriate and sufficient data informs the process of developing an effective product that will address the groups' needs and wants. Needs assessments are only effective when they are ends- focused and provide concrete evidence that can be used to determine which of the possible means-to-the-ends are most effective and efficient for achieving the desired results which is needed in designing a project.

Sanoff (2000) in his conclusion on community engagement noted that only when we know what people really want could they develop an effective project. The needs assessment should be followed by a capacity assessment to see what strengths the community has which it can use to address its problems. The project should seek to strengthen any weaknesses in

the community. The project can then aim to help the community achieve part of its vision. It is important to carry out a needs assessment before planning development work, whether we think we know what the needs are or not (Lee & Reeves, 2009). Gilbert (2008) added that for successful project completion and sustainability of projects, the projects goals and targets must be related to community needs and anticipations.

Project planning defines the project activities and products that will be performed and describes how the activities will be accomplished. The purpose of project planning is to define each major task, estimate the time and resources required, assess achievement of the main objective and provide a framework for management review and control. This is where the design, action planning, details for the technical design and implementation (action) plan are finalized. Action planning may uncover logistical constraints that affect the feasibility of the selected design (Institute, 2013).

Project planning entails scheduling of the various activities comprising the project activities and how they interrelate. The activities comprise the legal or regulatory requirements, procurement processes that include seeking for development projects and funding institution approvals, activities of the funding institutions leading to credit award and the actual site works. The planning aims at optimizing time, cost and procurement of human capacity for development projects within the legal, regulatory and policy framework existing for each specific project (Jabareen, 2006).

The project planners need inputs from the public at particular points in the plan-making process to meet statutory requirements (Bryson, 2011). Communities need a continuous process of engagement, as they are outside the system and require information, knowledge

and time to ensure they can engage effectively. Community involvement in project planning can assist with developing good relationships at local level with communities, and helping to identify community needs in advance. This can provide larger certainty and time in the determination process and execution of projects (Muraguri, 2011). The community, combining their role as the primary partner in a project, should make an informed choice-of-technology and level of service decision.

At the project design, projects managers should emphasis efforts on receiving public input and giving information on those decisions and activities that have the highest potential influence on the community and on the big-picture matters that are most important to the public (Fulgham & Shaughnessy, 2013). Recent studies have revealed that sustainability of projects progresses when communities are allowed to take a central role during all stages of the project, including design and planning (Dernbach, 2002); LaPelle, *et al* 2006; & (Barbier, 1987).

2.4 Empirical Review

Fulgham and Shaughnessy (2013) recommended community engagement in project planning can lead to different types of project success: Attitudinal success most likely when the project creates or improves social capital, when communities participate in project planning, establishment, and daily management, and when benefits are equitably dispersed without choice capture; behavioral success most likely when the project invests in building capacity of local individuals and institutions; ecological success most likely when the project engages positively with cultural traditions and governance institutions, and economic success most likely when the project invests in capacity building.

The Implementation phase of the Project Management Process puts the project into action. Kerzner (2013) states that, project implementation or execution is the phase in which the plan designed in the prior phases of the project life cycle are properly coordinated and put into action. The purpose of project execution is to deliver the project anticipated results or deliverable and other direct outputs. It is the longest phase of the project management lifecycle, where most resources are applied. Ochieng and Owuor (2013) recommended that project implementation should include the planning, coordination of the various activities and the execution of the project activities required towards achievement of the project deliverables. Most projects fail to be completed on schedule due to poor planning, lack of implementation plan and uncoordinated execution of the relevant activities.

According to Ojwang and Bwisa (2014), a manager must have vision, a good implementation plan, follow-up and follow through for successful implementation. Successful implementation requires, in addition, proper knowledge and skill, clear well-written goals, clear priorities, a clear plan of action, and emphasis on quality control (QC), quality assurance (QA) and quality improvement (QI). An inadequate implementation plan is the final factor that can sabotage an otherwise successful project performance.

According to Sanoff, (2000) participation by ordinary citizens is determined by the balance between benefits and costs, and, although benefits include collective goals, personal incentives and personal costs are notably the dominant factors. The intensity of participation varies inversely with the size of the participating group. The more intense the activity, the higher the cost to participants in money and time with the result that fewer people participate. The smaller the participating group, the less representative it will be of the affected population. Finally, individuals of higher socioeconomic status are better

placed to bear the costs of participation and hence tend to be overrepresented when participation is intensive.

Projects are to be implemented in a specially designed organization whose life span is synonymous with the life of the project. Research has shown that in general, project possess a specialized set of factors which if favorable can make the project successful. These are called the key success factors or variables by some authors (Cooke-Davies, 2002) and (Belassi & Tukel, 1996). In their work, Pinto and Slevin (1987) stated in their journal, Project management journal, that project implementation involves a number of activities, these activities or factors are sequenced to occur (or be considered) in a logical order instead of randomly or concurrently. The community, as the beneficiaries, must be involved in the sequencing and ultimate implementation of the project (Connor, 2009).

According to Hellawell (1991), monitoring of projects by relevant bodies is essential and of greatest benefit because of the improved insight they provide concerning project completion status. The best-laid project can go awry if not properly monitored. Through proper monitoring, delays can be readily identified, periodic reports that are made is also very helpful. There must be professionally qualified personnel appointed to monitor the progress of the project, usually the Monitoring and Evaluation team. Thus, project management, especially in the public sector involves monitoring and control techniques by project managers and supervisors, physical observation and assessment of work initiated and executed by the project managers. A Project is considered to be successfully monitored and evaluated if it, among other things comes in on-schedule (time criteria), comes in on-budget (monetary criteria), achieves basically all the goals set for it (effective criteria), is accepted and used by the clients for whom the project is intended (client satisfaction criteria) (Institute, 2013). Thus, for any project in the area to be considered successful, the criterion of time, efficiency,

effectiveness and quality delivery among others are to be satisfied. Monitoring and evaluation which is achievable through planned site meetings can help organizations extract relevant information from past and ongoing activities that can be used as the basis for programmatic fine-tuning, reorientation and future planning. Without effective planning, monitoring and evaluation, it would be impossible to judge if work is going in the right direction, whether progress and success can be claimed, and how future efforts might be improved (Li, 2014).

An evaluation also produces other critical information about impact, cost-effectiveness, and future potential. Both monitoring and evaluation make use of information gathered to assess the status of programs at any given time, and serve as a basis for reviewing and revising project plans, making sound decisions, and meeting donor funding requirements. Participatory monitoring and evaluation provides an opportunity for development projects to focus better on their ultimate goal of improving poor people's lives by broadening involvement in identifying and analyzing change, a clearer picture can be gained of what is really happening on the ground. It allows people to celebrate successes, and learn from failures and for those involved, it can also be an empowering process, since it puts them in charge, helps develop skills, and shows that their views count.

The involvement of the beneficiaries is essential and therefore the architect of development projects needs to design a system of information collection with participation built into it. This study is not only interested in the "official" point of view of the community chiefs, project managers and leaders only but also the unofficial view – of the local. The resulting analysis generates lessons that are fed back to improve the project performance

and efficiency. The process is meant to strengthen the organizational capacity of the participants of the various business associations.

According to Tiwari *et al*., (2014), for community based monitoring and evaluation to achieve its purpose the following must be ensured: The local people must be empowered on how to systematically envision, design, and implement a project; the purpose or objectives of the monitoring and evaluation must be clearly explained to and understood by the local people. The methodology applied must be made simple and flexible enough to allow the local people adapt and use it; the implementing agency should also define their role and work closely with the local people, particularly during the first year of the project schedule; information received both positive and negative and other data during the course of the project must be analyzed and interpreted correctly; and there should be a way to document the outcome and learning that came as a result of the monitoring and evaluation exercise.

Project sustainability is the continuing of project benefits beyond the project period, and the continuation of local action stimulated by the project, and the generation of successor services and initiatives as a result of Project-built local capacity (Ashwell & Barclay, 2010). Such benefits may include improved living standards of people in the community, improved income levels and increased business opportunities.

Evidence from a wide range of literature and project documentation suggest that in community-managed projects, many factors affect post-project sustainability. Among these factors are institutional ones which include policy, external follow-up support, institutional strength, integration with existing services and leadership of the project (Mona Shediac-Rizkallah, 1998).

According to Chai (2009), the main categories of factors supporting sustainability are policy, institutional, market and regulatory environment. He furthered that sustainability strategies must be based on environmental, social and political conditions. Bamberger & Cheema (1990) classified factors affecting sustainability of any project into three broad group of factors; design and implementation, project organization and external factors operating at local, national and international levels. They argued that sustainability is affected by a wide variety of macro-level factors over which project planners and managers have very little control, changes in the national and international economic environment can have drastic effects on the long term viability of the project. Other factors that may affect sustainability are the socio cultural characteristics of beneficiaries. The social and political organization of communities can either facilitate or make more difficult the project sustainability.

Success indicator for the realization of project sustainability is high degree of citizen participation that only can be guaranteed when the initiative of the people is sufficiently stimulated to arouse their enthusiasm and wholehearted involvement (Bovaird, 2007). The above-mentioned view is upheld by the position of (Seghezzo, 2009) that people's involvement is an act through which the beneficiaries of a development effort share in the identification of the development priorities, planning, implementation consumption and evolution of the development programs. The foregoing forms the importance of memorandum of understanding in achieving sustainable community development projects.

The foregoing studies have not specifically identified factors affecting sustainability of projects undertaken by higher education institutions in Kenya together with their host communities. A broad sustainability study should be incorporated into the project management life cycle right from the inception. This researcher therefore studied effects of

engaging the community during the phases of planning, implementation and monitoring and evaluation on project sustainability. This line was pursued because there is a growing need to have community engagement inform the sustainability strategy of project by JKUAT.

2.5 Critique of Literature

Critique of literature is the evaluation of empirical and theoretical literature. From the literature review, community engagement on projects has been descriptive and isolated in terms of context. The few studies that have been comparative are not comprehensive in their outlook. The literature has been keen to point out specific issues while leaving out others.

Community participation is the sociological process by which residents organize themselves and become involved at the level of a living area or a neighborhood, to improve the conditions of daily life (water, sanitation, health, education). It comprises various degrees of individual or collective involvement (financial and/or physical contributions, social and/or political commitment) at different stages of a project. Since, it implies that residents set up management committees in charge of equipment (Moningka, 2000).

Moningka (2000) adds that community participation can be seen as a process in which community members are involved at different stages and degrees of intensity in the project cycle with the objective to build the capacity of the community to maintain services created during the project after the facilitating organizations have left. Community participation throughout the whole project, thus from project design and implementation to evaluation, ensures the reflection of community priorities and needs in the activities of the project and motivates communities into maintaining and operating project activities after the project is completed.

According to Mansuri and Rao (2004) community based projects are typically implemented in a unit referred to as a 'community'. This often refers to either an administratively defined locale such as a village, a tribal area, or a neighborhood, or identifies a common interest group, such as a community of weavers or potters. It is common in the literature on development policy to use the term, without much qualification, to denote a culturally and politically homogeneous social system, or one which is, at least implicitly, an internally cohesive and more or less harmonious entity.

Whilst quantitative based evidence plot out the common factors influencing the level of community engagement in projects, methodological approach adopted are inadequate for understanding effects of community engagement in sustainability of projects (Eskerod, Huemann, & Ringhofer, 2015). Community engagement is no longer viewed as a passive activity but an active one from where local development projects are owned and managed when the local communities are involved at every stage of that project. It is viewed as both a means to an end and an empowerment for the locals. It gives them a sense of ownership as they see that their contribution is appreciated when incorporated.

Recent studies have shown that sustainability of projects improves when communities are allowed to take a central role during all stages of the project, including design and planning (Mangin, 1991) and (Muraguri, 2011). This research zeroed in this aspect but with regard to Universities and JKUAT as a case study. It was realized from a study carried out by (Crawford & Helm, 2009) that projects identified, planned, implemented and managed by the community outlive those enforced by a benefactor with little or no community involvement. However, this did not specifically outline the specific sustainability dimensions that will be achieved by having a benefactor who resides in the same environment with the beneficiaries, like in the case of JKUAT. Moreover, the above studies applied descriptive

research design while this research will apply case study methodology. Finally, PMBOK (2009) classically identified time, quality and scope as the major factors that underline project success. This research sought to include community engagement to those principles for a project to gain acceptability towards achieving sustainability.

2.6 Research Gaps

Research in community engagement has largely been carried out in other countries of the world including India and South Africa. However, despite its acknowledged and venerated spot in the circles of development, little substantial literature exist on how engaging the community at each detailed level of the project life can enhance project sustainability. A clear gap exist on how to entrench project sustainability at specific levels during planning, implementation, monitoring, and evaluation of the project life. As indicated, little effort has been made so far to point out the inclusions to be made at needs assessment and identification, resources mobilization and scheduling and well as development of performance indicators to make the projects more sustainable.

The concerns about project sustainability indicate that the current way of producing, organizing, consuming, and living may have negative effects on the future. In short, our current way of doing 'things' is not sustainable. Therefore, some things have to change. Projects are considered as temporary organizations that deliver any kind of change to organizations, products, services, policies or assets. (Lundin and Söderholm, 1995; Turner and Müller, 2003). Therefore, it can be concluded that a more sustainable society requires projects. In fact, this connection between sustainability and projects was already established by the World Commission on Environment and Development (1987). However, Eid concludes two decades later that the standards for project management "fail to seriously address the sustainability agenda" (Eid, 2009).

Following a structured project management method enables companies to predict and mitigate risks, better manage costs and deliver quality results that satisfy clients. In the most mature project management organizations, these project goals are directly linked to strategic business objectives, giving these organizations a powerful competitive advantage. Yet few companies consistently meet their project goals or measure project success. This inconsistency stems largely from a failure to implement and follow well-defined project management practices, despite ongoing efforts to improve processes with the goal of delivering better, faster, cheaper results (Milosevic, 2003).

Ashwell & Barclay, (2010) focused on projects' sustainability in terms of prudent financial management practices, However they did not give details on how community engagement in the management of finances can lead to project sustainability. Gaps therefore exist in the studies done in these areas on the steps that can be taken into consideration on how sustainability can be enhanced on each phase of the project lifetime. On governance, Hellawell (1991), did not give a practical guide on how to run the organizations efficiently for maximum profits. His study did not indicate how the organizations can work together with the community to ensure maximum returns. It ignored the input of community engagement particularly at the planning phase. It is common for project management literature to confusingly intertwine these two separate components of project success and present them as a single homogenous group. In order to properly define and assess project success, a distinction should be made between product success and project management success, as they are not the same.

Pinto & Slevin (1998) after sampling over 650 project managers, the researchers concluded that "project success" is something much more complex than simply meeting cost, schedule,

and performance specifications. In fact, client satisfaction with the final result has a great deal to do with the perceived success or failure of projects. In the words of Baker *et al*. (1993): "instead of using time, cost and performance as measures for project success, perceived performance should be the measure." Clarke (1999) also states that by targeting the main problems and issues using the key success factors as a focus could make a significant difference to the effectiveness of project management. Most researchers do not look at how the projects should perform after the implementation.

The relationship between sustainability and project management is still an emerging field of study (Gareis *et al*., 2009). Literature is scarce, but some first studies and ideas were published in recent years (Labuschagne and Brent, 2006; Association for Project Management, 2006; Taylor, 2008; Eid, 2009; Gareis *et al*., 2009; Silvius *et al*., 2009; Turner, 2010; Silvius *et al*., 2010).

There is also scanty literature on the topic as regards to community engagement on the three phases of project management geared towards project sustainability in Universities in Kenya. Key effects of community engagement on project sustainability may vary between different universities in Kenya depending on their location, socio-economic structure and types and size of projects undertaken. Therefore, there is need to study the effect of the above with JKUAT as a case study. This research will seek to fill this gap. Maraga, Kibwage, & Oindo (2010) in their assessment of socio-economic status and participatory development in Kenya, concluded that in spite of poverty paradox in Kenya, attracting renewed attention among researchers, policy makers and common public in equal measure, very little attention has been directed at the relationship between socio-economic factors and popular participation in management of projects. This research study sought to fill this gap through

investigating the role of community engagement during the phases of planning, implementation and M & E on projects sustainability, with JKUAT being a case study.

2.7. Summary

Projects can make a contribution to the sustainable development of organizations. It should therefore be expected that the concepts of sustainability are reflected in projects and in definite project phases. Even though some aspects of sustainability are found in the various standards of project management, it has to be concluded that the integration of sustainability in projects and project management is not fully recognized yet.

As stated earlier, the integration of the concepts of sustainability in project management has only just begun (Gareis *et al*., 2009). The current state of research on project sustainability and project management is therefore mostly interpretive, giving meaning to how the concepts of sustainability could be interpreted in the context of projects, rather than prescriptive, prescribing how sustainability should be integrated into projects. The studies provide ingredients, but no clear recipe of this critical integration at detailed levels of the project life.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodologies that were used in the study. It includes research design, target population, sample and sampling techniques, sampling frame, data collection methods, data collection procedures, validity, reliability of data collection instrument, pilot testing and data analysis.

3.2 Research Design

In this study, the researcher applied case study design. The design emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. According to (Yin, 2013), case study is an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources. Case study research, through reports of past studies, allows the exploration and understanding of complex issues. It can be considered a robust research method particularly when a holistic, in-depth investigation is required. Recognized as a tool in many social science studies, the role of case study method in research becomes more prominent when issues with regard to education (Gulsecen & Kubat, 2006), sociology (Grassel & Schirmer, 2006) and community based problems (Johnson, 2006) are raised.

As stressed by Kothari (2004) the key features of a case study are its scientific credentials and its evidence base for professional applications. This approach is appropriate for this study since the researcher intended to collect detailed information through descriptions making it useful to

identify variables under the study. Secondary sources of data were used and a variety of primary documentary evidence, such as, diaries, official records, reports, archives, and non-textual information such as maps and were also used.

3.3 Target Population

The estimated total population of staff and community members directly involved in community projects is 2,000 as per records at JKUAT Project Coordination Office Report, 2014 – 2015. The study therefore covered 200 different people who have been involved with JKUAT sponsored projects. This represented 10% of the entire population. These included project managers because of their involvement and expertise in management of university projects, project team and workers who were deeply involved in the implementation, JKUAT management who were project sponsors and JKUAT community members who were benefiting directly from the projects and therefore in a unique position to answer on the sustainability concerns.

3.4 Sample and Sampling Technique

According to Sekaran and Bougie (2010), sampling frame can be defined as a physical representation of the population from which sample is drawn and useful in providing the listing of each element in a population. In the study, the sample frame comprised of Project Managers, Project Team/Workers, Project Sponsors and Community Members. The study population was stratified into strata based on the different groups of people who have been involved with the projects. The simple random sampling procedure was then used to pick the sample. It is preferred because it allows unbiased sampling and give the research work more scientific features thereby making the validity of the research findings more concrete. This includes project managers, project team, JKUAT management who are the sponsors and community members.

According to Mugenda and Mugenda (2013), for any meaningful study, 10-30% of the target population would provide an adequate sample size. (Mugenda & Mugenda, 2013) also suggests that at least 10% of the population is a good representation where the population is large and 30%, where the population is small. They observed that a researcher selects the sample due to various limitations that may not allow researching the whole population drawn. This study sampled 10% of the target population, giving a sample of 200. Stratified random sampling procedure was administered to select the subjects of study. Ritchie and Lewis (2003) states that stratified sampling ensures a high degree of representativeness of all the strata or layers in the population.

Table 3.1: Sample Size

Title	Population	Sample
Project managers	30	3
Project team/ workers	650	65
Project sponsors	20	2
Community members	1300	130
Total	2000	200

Source: (JKUAT Project Coordination Office Report, (2014-2015)

3.5 Data Collection Instruments

The type of instrument used by the researcher depends on the data collection method selected. Massey (2008), further states that the instrument must be reliable and valid. For this study, the primary data collection instrument was a self- administered questionnaire as attached as appendix 1. A questionnaire is a systematically prepared form or document with a set of questions deliberately designed to elicit responses from respondents or research informants for collecting data or information (Ritchie & Lewis, 2003).

The questionnaire had both closed and open ended questions. The closed ended questions are aimed at giving precise information hence minimizing bias. They were used in the analysis of quantitative data. The open ended questions ensured that the respondents are given freedom to express themselves. They were used in the analysis of qualitative data. The questionnaire in this study was divided into four sections with each covering planning, implementation, monitoring and evaluation and project sustainability. Additionally, the instrument had five-point Likert scale format to ensure that respondents are guided well in answering the questions. A Likert scale is more useful when a behavior needs to be evaluated on a continuum (Stoecker, 2012).

Secondary data on the other hand is data that has previously been collected and is being utilized by a person other than the one who collected the data. Secondary data can be located by using printed indices, such as the American Statistics Index or the Statistical Reference Index, available at most libraries. Secondary data was collected from JKUAT's annual reports, journals, books, researches, thesis, dissertations, articles, working papers, and the internet.

3.6 Data Collection Procedure

Data collection was done by the drop and pick method. The questionnaires was given to the respondents and later collected. According to (Yin, 2013) respondents are more truthful while responding to the questionnaires regarding controversial issues in particular due to the fact that their responses are anonymous.

3.7 Pilot Study

Pilot test was conducted to establish whether the respondent had the same understanding of the questions and thus would offer the information required. According to (Mugenda & Mugenda, 2013) conducting a pilot study is important before the main study. The pilot study was conducted

using 10% of sample in each of the strata, which includes the project manager, project team, project sponsors and community members, giving a total of 20 respondents who were not included in the actual study. This enabled the researcher to conduct reliability tests and to familiarize with the research environment. Pilot testing was also important in checking the suitability and the clarity of questions on the instruments designed, relevance of the information being sought, and the language used and the content validity of the research instrument. The data collected from the pilot test was be subjected to a Cronbach's alpha analysis to ascertain the reliability of the instrument.

3.7.1 Reliability

In the study, reliability was achieved through pre-testing so as to refine and ascertain the reliability of the research instruments before they are applied in the actual research. The discovered errors were corrected, ambiguous questions made clearer and relevant and the contents revised. Variables derived from test instruments are declared to be reliable only when they provide stable and reliable responses over a repeated administration of the test (Kuehl, 2000). Cronbach's alpha analysis formula was applied to compute the Co-efficient as follows;

Re = reliability of the original test

r = reliability of the coefficient resulting from correlating the scores of the odd items with the scores of the even items.

$$Re = \frac{2r}{r+1}$$

Where the reliability coefficient (alpha = α) range from 0 to 1, with 0 representing an instrument full of error and 1 representing total absence of error. A reliability coefficient (alpha) of 0.70 or higher is considered acceptable reliability (Kothari, 2004)

3.7.2. Validity

The questionnaire was evaluated for content validity. Content validity was done by expert judgment. Pilot study was done on randomly selected members of JKUAT, who were not included in the main study. This is mainly to verify whether the items generated by the researcher displays stimulus homogeneity hence valid and reliable.

3.8 Data Analysis and Presentation

The returned questionnaires were adequately checked for credibility and verification after which the data collected was coded and tested for completeness and then analysis will be done using Statistical Package for Social Sciences (SPSS) software. Descriptive statistical techniques composed of frequencies, percentages, means and standard deviation was used to analyze field data from questionnaires to assist the interpretation of data using SPSS. Inferential data analysis was done using Pearson Correlation Coefficient. According to Mugenda and Mugenda (2003), correlation technique is used to analyze the degree of relationship between two variables. Correlation is the measure of the relationship or association between two continuous numeric variables (Kothari, 2004). Correlation indicates both direction and degree to which they vary with one another from case to case without implying that one is causing the other.

Correlation analysis results give a correlation coefficient which measures the linear association between two variables. The value of correlation coefficient ranges between -1 and +1. A correlation coefficient of +1 indicates that two variables are perfectly related in a positive linear,

with a -1 indicating negative linear relationship and a 0 indicating absent of a linear relationship between two variables. This correlation was used to determine the direction of the relationship between the dependent and the independent variables. Data was presented in tables with mean, standard deviation and percentages. Presentation of findings was carried out using statistical software including SPSS. This software aided in the generation of suitable graphs, charts and tables which were used in presentation of the research findings.

3.8.1. Statistical Model

Model specification

In the study, Multiple Linear Regressions, which is a linear regression model that contains more than one independent variable, was used to determine the effects of community engagement in project phases on project sustainability in Public universities in Kenya. The regression model is illustrated;

$Y=\beta_0+\beta_1X_{1+}\beta X_2+\beta X_3+e$

Y= Project Sustainability

$\beta_{0=}$Constant

$X_{1=}$ Project Planning Phase

$X_{2=}$ Project Implementation Phase

$X_{3=}$ Project Monitoring and Evaluation Phase

β_1 β_2 $\beta_{3\,=}$ Regression co-efficient

e=Error term

3.8.2. Measurement of Variables

The conceptual framework has outlined the independent and dependent variables for this study. The independent variables are project planning, project implementation and project monitoring

and evaluation. The dependent variable was project sustainability. The indicators for measuring project planning was needs analysis, project request and objective analysis. Indicators for measuring project implementation was implemented plan, coordination of activities and work schedule, progress and budget reports while the indicators that were used to measure the project monitoring and evaluation variable were M&E team composition, review of achievements against set of objectives and site meetings. The dependent variable of project sustainability was measured by the indicators of improved standards of living, high income levels and recorded growth.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1. Introduction

This study sought to find out the effects of community engagement at different project phases at project sustainability for projects undertaken by public Universities in Kenya. Specifically, the study examined the independent variables namely community engagement in project planning, implementation and monitoring and evaluation phases with the dependent variable being project sustainability. This chapter presents the empirical findings and the results of application of variables using case study research design. The data was cleaned, coded and analyzed based on each independent variable using Statistical Package for Social Sciences (SPSS). First, the analysis, characteristics of the sample is presented. Consequently, analysis, characteristics and discussion of the variables in the conceptual framework in chapter two are presented. Thirdly, statistical modelling of the variables was performed and the findings summarized in the next section.

4.1.1. Response Rate

The study targeted 200 employees categorized into their respective designations; Project Manager, Project Team / workers, Project Sponsors and Community Members of Juja. Table 4.1 indicates that out of the 200 questionnaires administered, 148 responded, which gave a response rate of 74%. According to Mugenda and Mugenda (2003), the statistically significant response rate for analysis should be at least 50%.

Table 4.1: Response Rate

Response rate	Sample size	Percentage (%)
Returned questionnaires	148	74
Un-returned questionnaires	52	26
Total	**200**	**100**

Scale reliability was assessed by computing the overall Cronbach's alpha reliability coefficient on Response Rate. The scale reliability was demonstrated since the overall Cronbach's alpha statistic was 0.778 which is greater than 0.7.

4.2. General and Demographic Information

This section includes the general demographic information. Respondents were asked about their Gender, highest level of education, projects they have been involved in with JKUAT and their roles in the respective projects.

4.2.1 Gender

The study sought to establish the gender of the respondents. The findings were as indicted in Figure 4.1

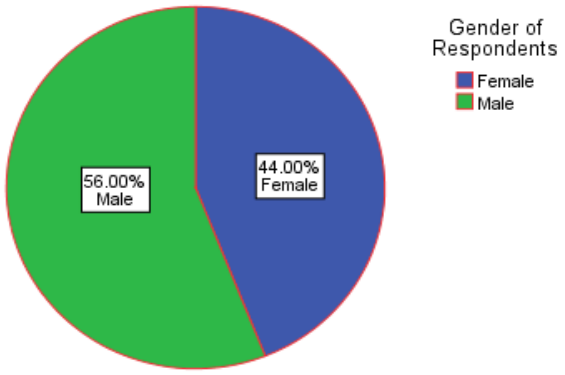

Figure 4.1. Gender of the respondents

56% of the respondents were male while 44% were female. The finding reveals that majority of the respondents were male. However, all the genders are well represented.

4.2.2 Level of Education

The respondents were asked to indicate the highest level of education, the finding are as indicated in figure 4.2.

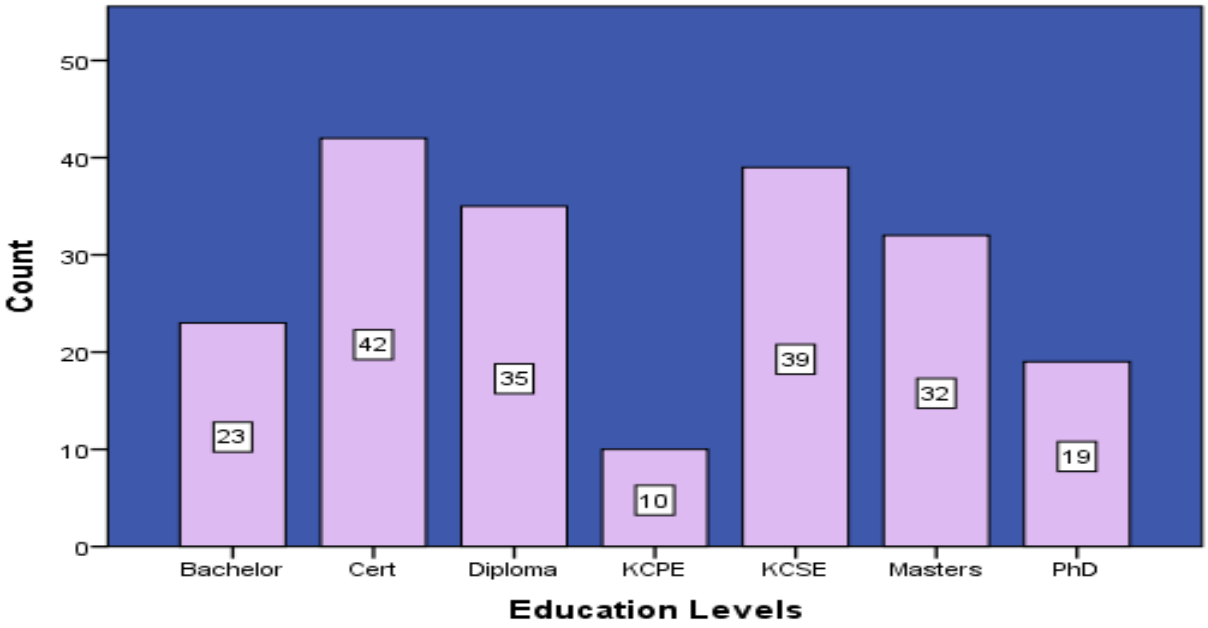

Figure 4.2. Level of Education

The findings indicate that majority of the respondents, 42%, had general certificates in different courses, 39% of the respondents had KCSE Certificate qualifications, 35% of the respondents had Diploma courses and 23% had Bachelor's degree. Only 19% of the respondents had PhD qualifications. The findings highlight that respondents were knowledgeable as per their education background as only 10% had KCPE qualifications and therefore able to respond to questions addressed in the study.

The educational background points to the fact that most of the respondents were properly educated and thus easily understood the issues raised in the questionnaire concerning the area of study. Given the level of education the respondents also clearly understood the ethics of research and thus were expected to give honest and informative responses which would add to the credibility of the final research findings and report.

4.2.3. Involvement in JKUAT – community collaborated project

The researcher sought to find out which JKUAT – Community collaborated project(s) the responds had been involved in. The findings are as illustrated in Figure 4.3.

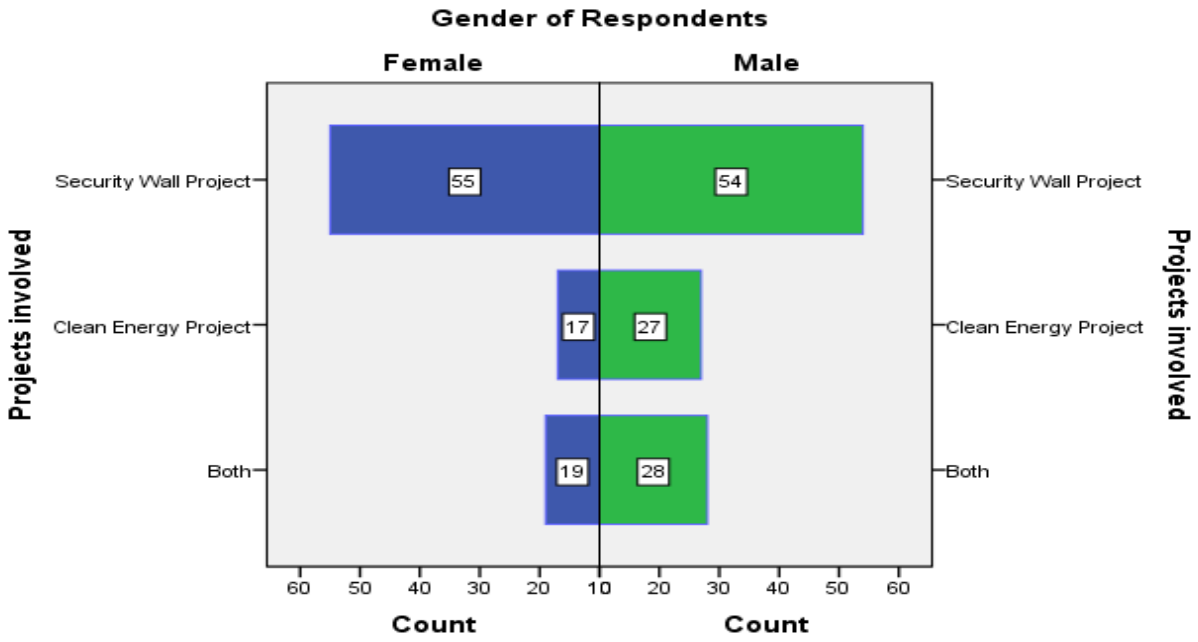

Figure 4.3. Gender of Respondents

From the findings, majority of the respondents were involved in the Security Wall project, which was a project done by JKUAT in collaboration with the Community. 55% of female respondents were involved in the Security Wall Project while 54% of the male respondents were involved in the Wall project. For the Clean Energy Project, only 17% of the female respondents were involved

and 27% of the male respondents. 19% of female respondents were involved in both the projects, i.e. the Security Wall Project and the Clean Energy Project while the male respondents involved in both projects were 28%. This is an indication that the community based projects are neither dominated by men nor women. However it's important to note that the gender ratio as per government regulations has been surpassed. This should be evident in the quality of decisions made to support the growth and sustainability of community based projects.

4.2.4. Role in specific project(s)

The respondents were requested to indicate their role(s) in the specific projects and the findings were as illustrated in Figure 4.4.

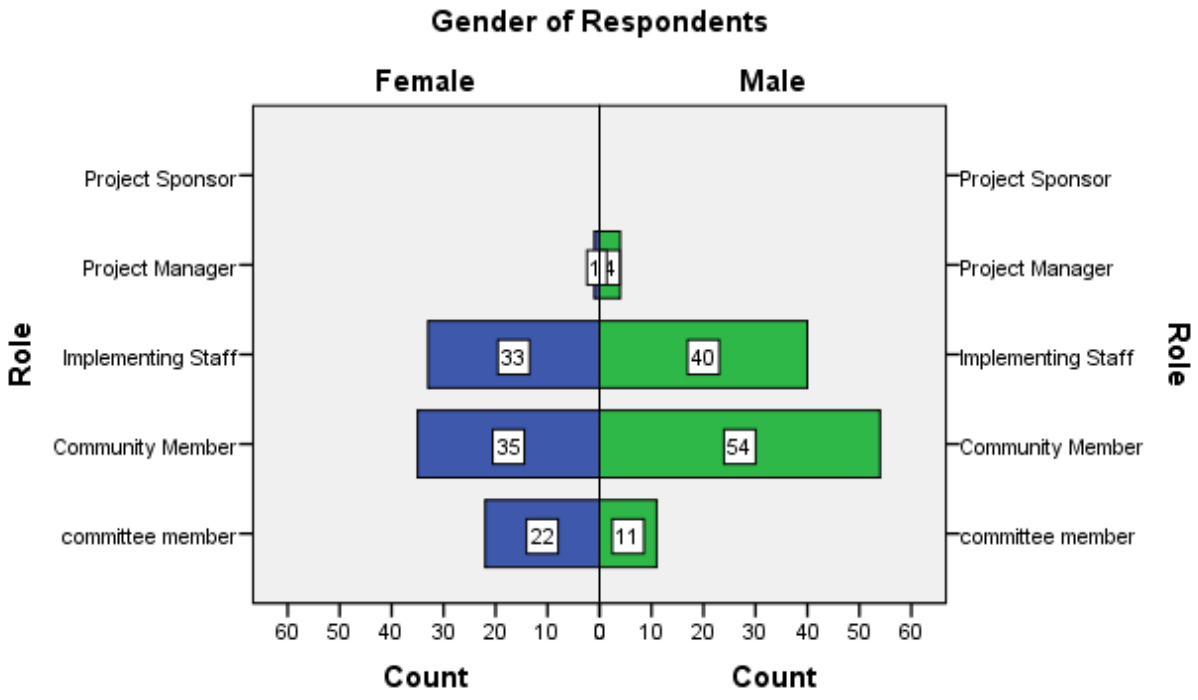

Figure 4.4. Role of the Respondents

None of the respondent in either gender was a sponsor from the findings. In general, the respondents were community members in their specific project(s) where male respondents were 54% and female respondents were 35%. 11% of the male respondents were among the Committee

Members as compared to 22% female respondents. Implementing staff were also a sizeable number whereby it comprised of 40% of the male respondents as opposed to 33% female respondents. The reliability was demonstrated since the overall Cronbach's alpha statistic was 0.715 which is greater than 0.7. From the findings, it can be concluded that majority of the respondents were community members with no specific role(s) in either of the project.

4.3. Descriptive Analysis of Study Variables

4.3.1. Community engagement in the Planning Phase

4.3.1.1. Identification of projects

The respondents were asked whether they were engaged in the Planning Phase in terms of analysis of the need of the projects and as illustrated in figure 4.5, majority of the respondents, 58%, disagreed in community engagement in the identification of community based projects. 51% of the respondents did not either agree or disagree indicating lack of information or disinterest in the projects. Needs assessment is an effective tool to clarify problems and identify appropriate interventions or solutions within a community. Through needs assessment the community and other project players are able to identify the projects that are of importance to them therefore prioritize. Scale reliability was assessed by computing the overall Cronbach's alpha reliability coefficient for the items of diverse recruitment and selection. The scale reliability was demonstrated since the overall Cronbach's alpha statistic was 0.788 which is greater than 0.7.

Figure 4.5. Involvement in identification of projects

4.3.1.2. Awareness and acceptance Campaigns by JKUAT on proposed projects

The researcher sought to find out if JKUAT performed awareness and acceptance campaigns within the community before embarking on the proposed project to establish the community's view and opinion of the proposed projects. Through the campaigns, the community gets the opportunity to air views on issues touching on the projects that would be of benefit. The campaigns also gave the community the opportunity to analyze and understand the core objective of the proposed community based projects. From the findings, majority of the respondents, 35.1% disagreed while 12% strongly disagreed on the existence of the awareness campaigns. Only 12.8% of the respondents strongly agreed on the awareness campaigns by JKUAT.

Table 4.2. Awareness Campaigns

Awareness Campaigns				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	18	12.2	12.2	12.2
Disagree	52	35.1	35.1	47.3
Neither Agree/Disagree	37	25.0	25.0	72.3
Agree	22	14.9	14.9	87.2
Strongly Agree	19	12.8	12.8	100.0
Total	**148**	**100.0**	**100.0**	

4.3.1.3. Community engagement in making decisions on Labor

The researcher sought to find out if the community was engaged in making decisions pertaining to project labour. The findings as illustrated in Table 4.3 indicate that 4.7% of the respondents strongly disagreed on engagement of community in decisions pertaining to labour and only 5.4% strongly agreed that community is engaged in decision making. 26.4% of the respondents neither agreed nor disagreed on whether the community was engaged in decision making on matters pertaining to labor. The reliability was demonstrated since the overall Cronbach's alpha statistic was 0.785 which is greater than 0.7.

Table 4.3. Engagement of community in decision on labor engagement

Decision on Labor Engagement				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	7	4.7	4.7	4.7
Disagree	66	44.6	44.6	49.3
Neither Agree/Disagree	39	26.4	26.4	75.7
Agree	28	18.9	18.9	94.6
Strongly Agree	8	5.4	5.4	100.0
Total	148	100.0	100.0	
Overall Cronbach's Alpha = 0.785				

4.3.1.4 Discussion on Community engagement in the Project Planning Phase

From the findings, it was evident that the community was not also actively engaged in decision making in matters pertaining to project identification, projects' awareness campaigns and decisions pertaining to labour. According to Bank & Fund, 2014, stakeholders' support ensures that stakeholders influence and share control over development initiatives, and the decisions and resources which affect them. This is key in ensuring that resources in community based projects are managed effectively, minimizing wastes and thereby ensuring their sustainability.

4.3.2. Community engagement in the Project Implementation Phase

4.3.2.1. Community engagement in implementation plan and coordination of the activities in the plan as per the schedules

Respondents were asked whether the community was engaged in the implementation plan and coordination of the activities of the plan. Majority of the respondents, that is, 40% disagreed involvement of the community in the implementation plan of the project. Only 5% strongly agreed that the community was involved in the implementation plan of the project. 17.5. % agreed on community engagement in implementation plan and coordination of the activities in the project schedules. The findings are as illustrated in Figure 4.6.

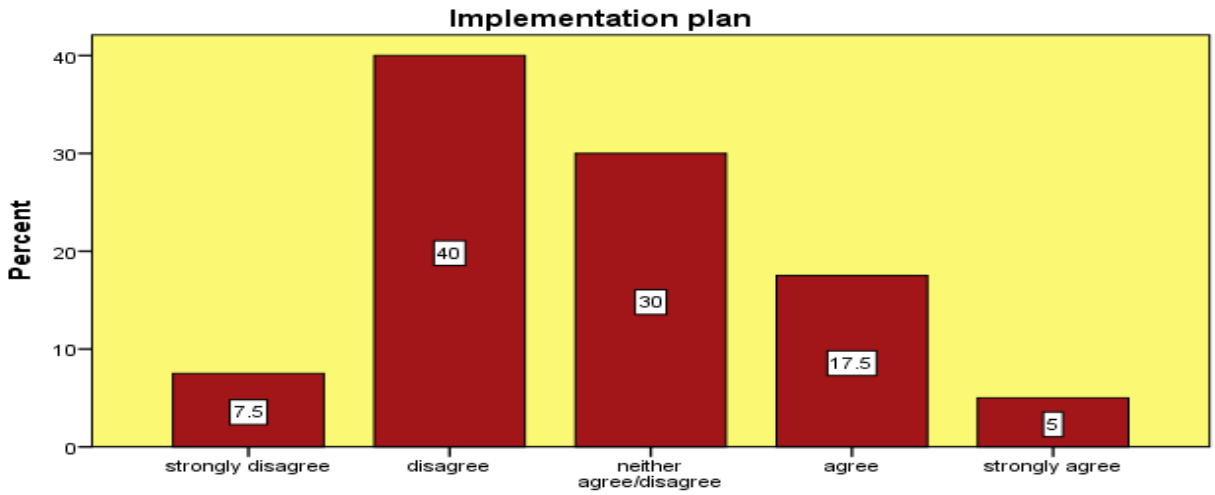

Figure 4.6. Engagement of community in implementation plan as per schedules

4.3.2.2. Community engagement in procurement of goods and services in accordance with the prepared budgets

The researcher sought to establish whether community was engaged in procurement of goods and services in accordance with the prepared budgets. The findings are as explained in Figure 4.7. Only 5% of the respondents strongly indicated engagement of community in procurement of goods and services. 35% of the respondents, who were the majority disagreed on the fact that the community is engaged in procurement of goods and services. 32.5% of the respondents neither agreed nor disagreed showing lack of information on the projects.

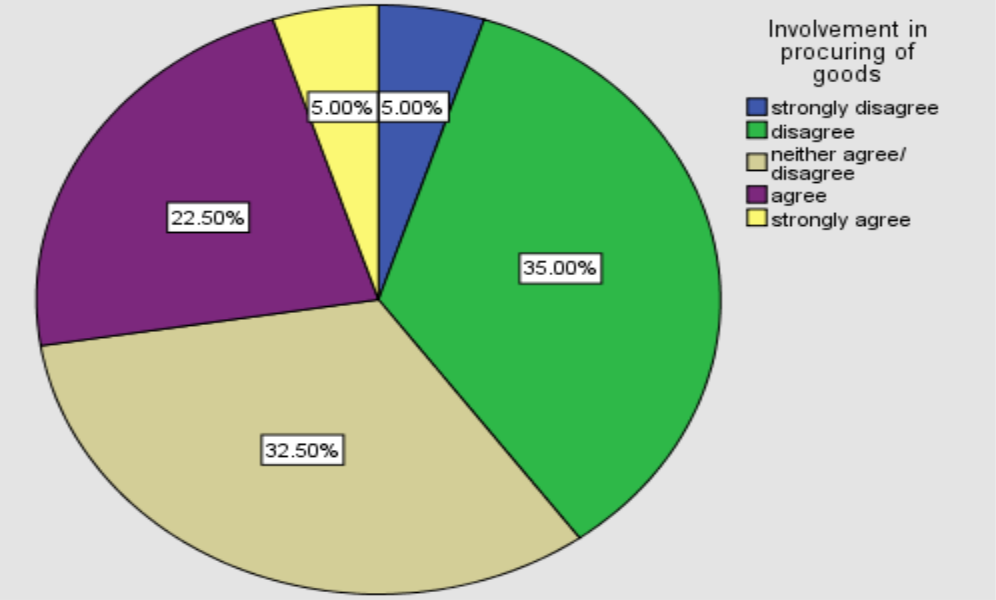

Figure 4.7. Community Engagement in procurement of goods and services

4.3.2.3. Community engagement in coordination of both resources and activities of the project in accordance with the project management plan

The findings indicated in Figure 4.8 showed that majority of the female respondents, 40% disagreed on community engagement coordination resources and activities of the project as per the Project Management Plan while only 17% agreed that the community was involved. For male respondents, majority of them, 18% neither agreed nor disagreed, implying lack of information as far as community engagement in coordination of resources and activities was concerned. 53% of the male respondents, who were the majority disagreed on community engagement in coordination of resources and activities as per the Project Management Plan.

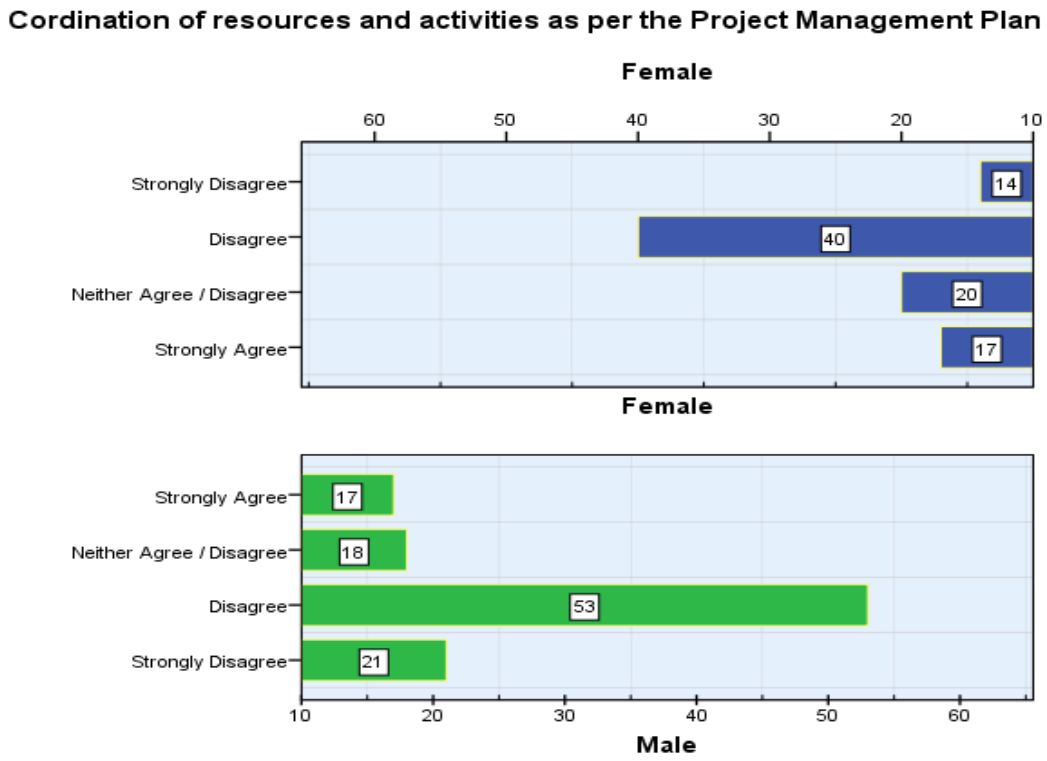

Figure 4.8: Community engagement in Coordination of resources and activities

Scale reliability for the items of project implementation phase were assessed by computing the overall Cronbach's alpha reliability coefficient. The reliability was demonstrated since the overall Cronbach's alpha statistic was 0.798 which is greater than 0.7.

4.3.2.4. Discussion on Community engagement in the Project Implementation Phase

As stated by Kerzner, 2013, the Implementation phase of the Project Management Process puts the project into action. He further indicated that, project implementation or execution is the phase in which the plan designed in the prior phases of the project life cycle are properly coordinated and put into action.

Ochieng and Owuor (2013) recommended that project implementation should include the planning, coordination of the various activities and the execution of the project activities required towards achievement of the project deliverables. In the project implementation stage, only a minority of the respondents were adequately involved in coordination of the community project activities which included synchronization and integration of activities, responsibilities and command and control structures to ensure that the resources of the projects were used most efficiently in pursuit of the specified objectives. Further only a minimal number indicated involvement in the development of work schedule for the project. This meant that the community was not in a position to assess projects' progress therefore could not tell whether the project would completed in time or tell whether project goals/targets/milestones would be efficiently achieved.

4.3.3 Community engagement in project monitoring and evaluation Phase

4.3.3.1. Community form part of Monitoring and Evaluation Team

The study sought to establish whether the community members form part of the Monitoring and Evaluation Team. The findings as indicated in table 4.4 showed that 20.9% neither agreed nor disagreed on whether the community formed part of Monitoring and Evaluation Team while 43.3% disagreed that the community formed the Evaluation Team. 18.3% of the respondents agreed that the community formed part of the Monitoring and Evaluation team. The overall Cronbach's alpha statistic was 0.72 therefore reliability was demonstrated since it was greater than 0.7.

Table 4.4. Engagement of community as part of Monitoring and Evaluation Team

Community forms the Monitoring and Evaluation Team				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	17	11.5	11.5	11.5
Disagree	64	43.3	43.3	54.8
Neither Agree/disagree	31	20.9	20.9	75.7
Agree	27	18.3	18.3	94.0
Strongly Agree	9	6.0	6.0	100.0
Total	148	100.0	100.0	

Overall Cronbach's Alpha = 0.72

4.3.3.2. Community involvement in Site Meeting

The respondents were requested to indicate whether the community was involved in site meetings whose main objective would to evaluate the progress of the project against the project objectives. 46.6% of the respondents disagreed on involvement in site meeting, 13.5% of the respondents did not have information on the issue since they neither agreed nor disagreed. Only 15.6 % agreed involvement of the community in site meetings. The findings are illustrated in Table 4.5.

Table 4.5. Community involvement in Site Meetings

Community involvement in Site Meetings				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	24	16.2	16.2	16.2
Disagree	69	46.6	46.6	62.8
Neither agree/disagree	20	13.5	13.5	76.3
Agree	23	15.6	15.6	91.9
Strongly Agree	12	8.1	8.1	100.0
Total	148	100.0	100.0	

Cronbach's Alpha = 0.72

4.3.3.3. Community engagement in formulation of Performance Indicators

The study sought to establish whether the community was engaged in formulation of Performance Indicators. The findings as illustrated in table 4.6, indicated that majority of the respondents, 48.6% disagreed while only 19.6% agreed that the community was engaged in formulation of Performance of indicators. 14.2% neither agreed nor disagreed on community engagement in formulation of Performance Indicators.

Table 4.6. Community engagement in formulation of Performance Indicators

Formulation of Performance Indicators				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	18	12.2	12.2	12.2
Disagree	72	48.6	48.6	60.8
Neither Agree/Disagree	21	14.2	14.2	75.0
Agree	29	19.6	19.6	94.6
Strongly Agree	8	5.4	5.4	100.0
Total	148	100.0	100.0	

Cronbach's Alpha = 0.72

Scale reliability for the items of project Monitoring and Evaluation phase were assessed by computing the overall Cronbach's alpha reliability coefficient. The reliability was demonstrated since the overall Cronbach's alpha statistic was 0.72 which is greater than 0.7.

4.3.3.4: Discussion on community engagement in project monitoring and evaluation phase

Monitoring of projects by relevant bodies is essential and of greatest benefit because of the improved insight they provide concerning project completion status, Hellawell (1991). Through monitoring and evaluation of projects, it would have been possible to showcase project progress which would reveal mistakes if any and offer paths for learning and improvement. Monitoring and evaluation also forms a good platform for project parties to learn from past experiences and to

incorporate the experiences learnt into policy and practice thereby reducing failure rates of future projects. It is also through monitoring and evaluation that assessment and establishment of crucial link between implementers and beneficiaries is achieved. Further, monitoring and evaluation would have provided a more robust basis for raising funds and influencing policy. From the findings it was clear that the community was not fully engaged in monitoring and evaluation of projects and this negatively affected project sustainability.

4.3.4. Project Sustainability

Respondents were asked their opinion on different questions on Project sustainability. As illustrated in Table 4.7, 7% of the respondents strongly disagreed that project sustainability is a priority for JKUAT, 55.5%, who were the majority disagreed too and only 14% of the respondents agreed that project sustainability was prioritized.

Table 4.7. Projects Sustainability a priority for JKUAT

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	14	9.6	9.6	9.6
Disagree	81	54.7	54.7	62.5
Neither agree/disagree	22	14.8	14.8	83.5
Agree	26	17.6	17.6	97.5
Strongly Agree	5	3.3	3.3	100.0
Total	148	100.0	100.0	
Cronbach's Alpha = 0.73				

4.3.4.1. Project Sustainability in relation to financial benefits to the community

Respondents were asked to indicate whether project sustainability had any direct financial benefits to the community. Majority of the respondents, 40%, agreed to the fact that project sustainability had direct financial benefits to the community, 35% strongly agreed and only 5% disagreed. The results are illustrated in Figure 4.9.

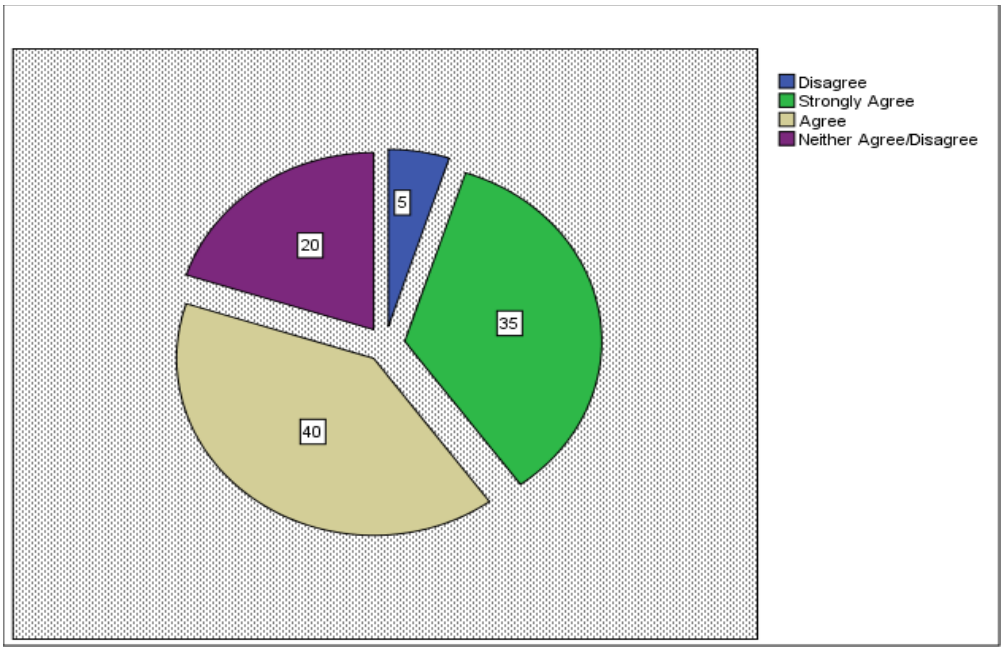

Figure 4.9: Project Sustainability has direct financial benefits to the community

4.3.4.2. Project Sustainability in relation to standards of living

The study sought to establish whether Project sustainability had any impact on the living standards of the community and as indicated in Figure 4.10, 42.50% agreed that project sustainability had improved the community's standard of living, 35% of the respondents stated that project sustainability had a positive impact on the community's standard of living while only 10% disagreed that project sustainability had no relation to community's standard of living.

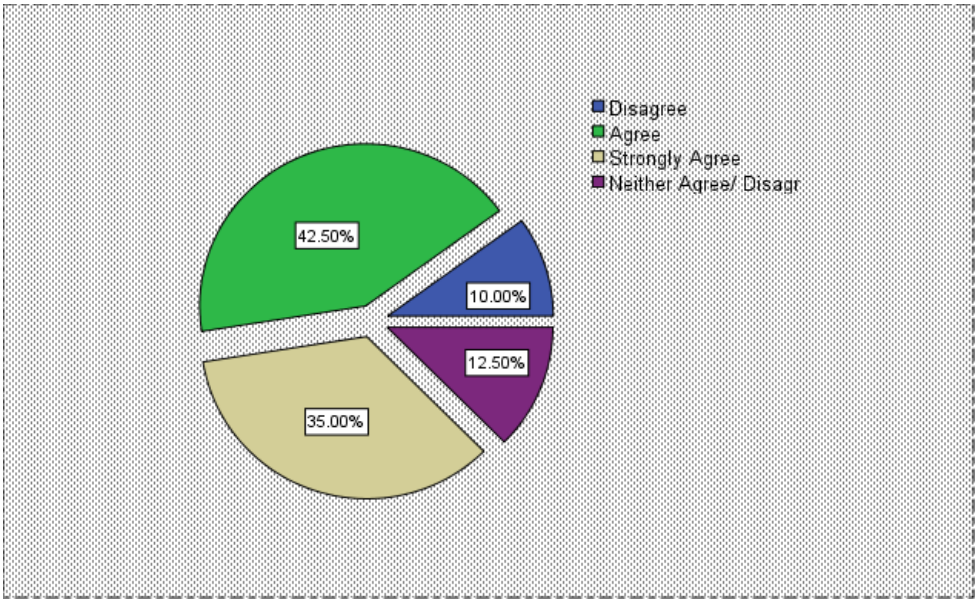

Figure 4.10: Project Sustainability in relation to standards of living

4.3.4.3. Project Sustainability in relation to business flexibility

The respondents were asked whether Project sustainability had increased business flexibility within the project environs and 84% of the respondents agreed that project sustainability had a positive impact on business flexibility, 70% strongly agreed, while only 12% disagreed on the fact that project sustainability increased business flexibility. 34% of the respondents neither agreed nor disagreed. Scale reliability for the items of project sustainability were assessed by computing the overall Cronbach's alpha reliability coefficient. The reliability was demonstrated since the overall Cronbach's alpha statistic was 0.705 which is greater than 0.7.

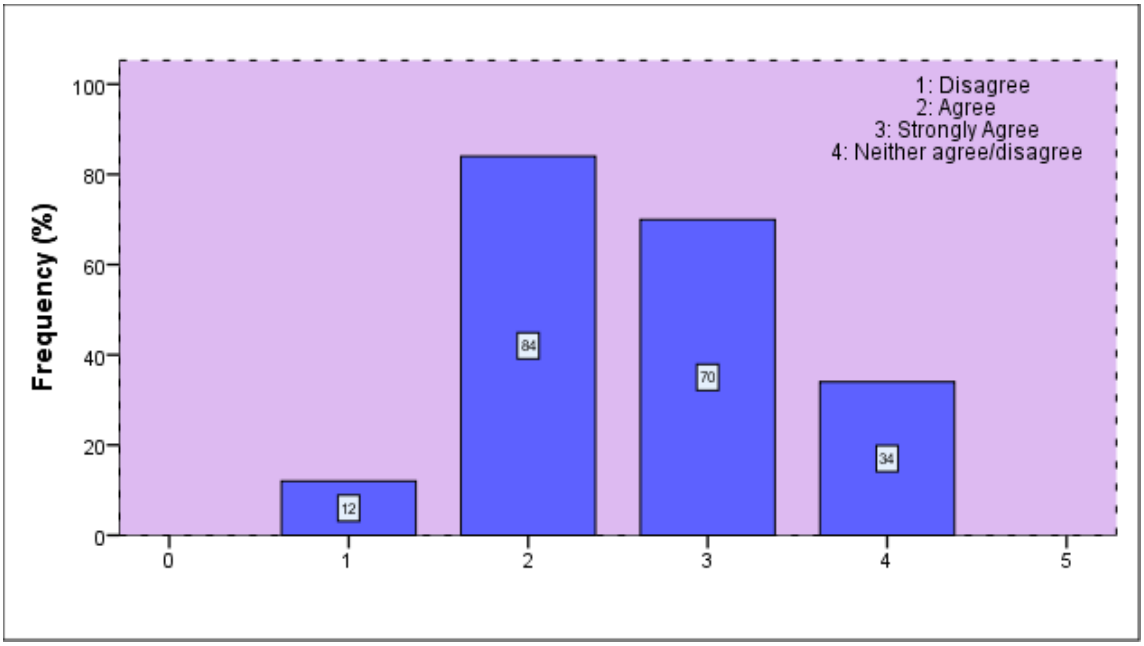

Figure 4.11: Project Sustainability in relation to Business Flexibility

4.4. Inferential analysis of study variables

4.4.1. Correlation Analysis

As illustrated in Table 4.8, Community engagement in Project Planning was found to be significantly related to Project Sustainability since the correlation was .02; (r = 0.020). Community engagement in Project Implementation was found to be positively related to Project sustainability with a correlation of .016; (r = 0.016) while Community engagement in Project Monitoring and Evaluation had a positive significance to project sustainability with a correlation of .247; (r =0.01) at 0.01 levels.

Table 4.8: Correlations Analysis

Correlations Analysis

	Project Sustainability	Community engagement in Project Planning	Community engagement in Project Implementation	Community engagement in Project Monitoring and Evaluation
Pearson Correlation	1	.020	.016	.247**
Sig. (2-tailed)		.813	.848	.012
N	148	148	148	148
Pearson Correlation	.020	1	.068	.162*
Sig. (2-tailed)	.813		.414	.049
N	148	148	148	148
Pearson Correlation	.016	.068	1	.034
Sig. (2-tailed)	.848	.414		.679
N	148	148	148	148
Pearson Correlation	.247**	.162*	.034	1
Sig. (2-tailed)	.012	.049	.679	
N	148	148	148	148

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

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

4.4.2 Regression Analysis

Table 4.9: Regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.248[a]	.062	.042	.834

a. **Predictors:** Community engagement in Project Planning, Community engagement in Project Implementation, Community engagement in Project Monitoring & Evaluation

b. Dependent Variable: Project Sustainability

The model analysis of regression in Table 4.9 indicates the strength of the relationship between the independent variables (Community engagement in Project Planning, Community engagement in Project Implementation and Community engagement in Project Monitoring and Evaluation) and the dependent variable (Project sustainability). The R square value in this case was 0.062, which clearly suggests that there is a strong relationship between Community engagement in Project Planning, Community engagement in Project Implementation, Community engagement in Project Monitoring and Evaluation and Project Sustainability. This indicated that Community engagement in Project Planning, Community engagement in Project Implementation, Community engagement in Project Monitoring and Evaluation share a variation of 83.4% of Project Sustainability.

Table 5.0: Analysis of Variance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	6.575	3	2.192	31.53	.027[b]
	Residual	100.100	144	.695		
	Total	106.676	147			

a. **Dependent Variable**: Project Sustainability

b. **Predictors**: Community engagement in Project Planning, Community engagement in Project Implementation and Community engagement in Project Monitoring and Evaluation

The Anova table indicates that the overall model was a good fit since (F-value = 31.53 and p-value = 0.02<0.05)

Table 5.1: Coefficients

Co-efficients[a]

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta β		
Independent variables	.144	.060		2.400	.018
Community engagement in Project Planning	.223	.077	.226	2.899	.005
Community engagement in Project Implementation	.323	.080	.323	4.063	.000
Community engagement in Project Monitoring and Evaluation	.589	.063	.587	9.292	.000

a. Dependent Variable: Project Sustainability

The model becomes Project Sustainability = $0.144 + 0.223_{PP} + 0.323_{PI} + 0.589_{PME} + \varepsilon$.

Community engagement in Project Planning was found to have a positive linearly significant influence on Project Sustainability (β = 0.223, p = 0.005<0.05). Here one unit change in Community engagement in Project Planning resulted in 0.223 unit increase in Project Sustainability.

Community engagement in Project Implementation was found to have a positive linearly significant influence on Project Sustainability (β = 0.323, p = 0.000 < 0.05). Here one unit change in Community engagement in Project Implementation resulted in 0.323 unit increase in Project Sustainability.

Community engagement in Project Monitoring and Evaluation was found to have a positive linearly significant influence on Project Sustainability (β = 0.589, p = 0.000 < 0.05). Here one unit change in Community engagement in Project Monitoring and Evaluation rresulted in 0.589 unit increase in Project Sustainability

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The beta coefficients indicate the relative importance of each independent variable (Community engagement in Project Planning, Community engagement in Project Implementation and Community engagement in Project Monitoring and Evaluation) in influencing the dependent variable (Project Sustainability). Community engagement in Project Monitoring and Evaluation was the most important in influencing Project Sustainability (Beta = 0.589) followed by Community engagement in Project Implementation (Beta = 0.323) and then Community engagement in Project Planning (Beta = 0.223).

4.5. Discussions

From the overall findings, it was established that the community was not actively engaged in the projects phases and therefore their needs were not taken into consideration during the project planning, implementation and monitoring and evaluation phases. These findings are in line with Ashwell & Barclay, 2010 who urged that by engaging the community in the different project

phases, community ensures the success of a project through collective responsibility in terms of resources control. The lack of this engagement will lead to project failure.

Seghezzo, 2009 stated that authentic community participation in the different project's phases enhances the sustainability of the community projects. He added that this could only be achieved through a people centered development. Project sustainability had positive impact on community's wellbeing in terms of improved living standards, increased business opportunities and increased income levels. According to Bamberger & Cheema 1990, a project is considered to be sustainable in the short term when the project activities and benefits continue at least 3 years after the life of the project. For project sustainability to be realized, the community must play a role Bovaird, 2007. Sustainable projects should be defined by people themselves and this is achievable through project requests. The community is supposed to be brought into focus through active participation and collective decision making. According to Seghezzo, 2009, without the community being involved in the different project phase's sustainability of the project may not be achieved since the community is unlikely to take responsibility for something they do not own themselves.

The study established that those who managed the community projects did not respond adequately to concerns whenever raised. Grievances raised by community members were not addressed appropriately. The study also found out that there was insufficient technical expertise to manage the project; there was insufficient human resource capacity developed for sustainability of the project; the community was not satisfied with the overall management of the community projects in Juja by JKUAT.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of key data findings, conclusion drawn from the findings highlighted and recommendation made there-to. The conclusions and recommendations are drawn in quest of addressing the research question or achieving the research objective which was the effect of community engagement in project phases on project sustainability in public universities in Kenya with main focus on JKUAT.

5.2. Summary of major findings

5.2.1. Community Engagement in the Planning Phase

From the findings, it can be deduced that the community was minimally involved in all the phases of projects development. In the project planning phase, the respondents indicated minimal involvement where 58% of the respondents disagreed in community engagement in the identification of community based projects which is a stage in planning. This meant that the community was given inadequate chance to front their project requests for purposes of planning and implementation. Through need assessment and analysis the community would also have fully engaged in discussions touching on what resources will be needed to carry out the projects.

Additionally, majority of the respondents, 35% disagreed on being properly engaged in awareness and acceptance campaigns while 12% strongly disagreed on the existence of the awareness and acceptance campaigns within the community before implementing proposed projects. The awareness and acceptance campaigns were an important aspect in project planning since the campaigns summarize the overall aim of the project as well as outline the

main objective of the proposed projects. Only 13% of the respondents strongly agreed on the awareness and acceptance campaigns by JKUAT indicating that very few respondents understood the overall aim of the project as well as the main objective of the projects.

5.2.2. Community Engagement in the Implementation Phase

In the project implementation stage, majority of the respondents, that is, 40% disagreed on adequate involvement of the community in the coordination of the project activities which include synchronization and integration of activities, responsibilities and command and control structures to ensure that the resources of the projects are used most efficiently in pursuit of the specified objectives. A minimal number of 5% agreed that the respondents were involved in the development of work schedule for the project. This meant that the community was not in a position to assess projects' progress therefore could not tell whether the project would completed in time or tell whether project goals/targets/milestones would be efficiently achieved. 17.5. % strongly disagreed on adequate community engagement in implementation plan and coordination of the activities in the project schedules.

In matters relating to engagement of labour in the project, 32% of the respondents neither agreed nor disagreed on whether the community was engaged in decision making on matters pertaining to labor. In addition, 35% of the respondents disagreed on the fact that the community is fully engaged properly in procurement of goods and services. The community was minimally engaged in the progress and budget report or in any financial matter. This clearly demonstrated, to a large extent, lack of adequate community engagement in the implementation stage of the community based projects.

5.2.3. Community Engagement in the Monitoring and Evaluation Phase

The findings also indicated minimal community engagement in the evaluation and monitoring stage. This was evidenced by the fact that 35% of the respondents disagreed that the community formed the evaluation team. This meant that the community could neither determine the degree of achievement of the project objectives nor identify the problems associated with project planning and implementation. However a few respondents, 16%, agreed that the community formed part of the Monitoring and Evaluation team. 30% of the respondents disagreed on involvement in site meeting therefore they did not get the opportunity to discuss projects' progress reports from the different project players. From the findings, the community was minimally engaged in formulation of performance indicators which consisted of various specific measurement tools for indicating how well teams were achieving specific goals. This was evidenced by the fact that majority of the respondents, 46%, disagreed on their engagement while only 15.5.% agreed that the community was engaged in formulation of performance indicators. The community could therefore not establish how well teams were achieving specific goals.

5.3. Conclusion

This section presents a discussion of the findings and compares and contrasts the findings with other scholarly studies done on the same topic.

5.3. 1. Community Engagement in the Planning Phase

The study has shown that the engagement of the community in all the project phases, which was not the case from the findings, is very crucial in ensuring sustainability of projects. The way in which issues on community-based projects are handled significantly affect the sustainability of the project by either fostering good working relationships between all the parties involved, or alienating the parties involved. From the findings, awareness and

acceptance campaigns were not extensively carried out before the actual implementation of the project and this negatively affected the sustainability of the project.

The level of community support determines whether a project becomes established, how quickly and successfully it consolidates, and how it responds and adapts to meet changing needs. It is therefore important that involving local communities' starts at the identification phase, when decisions are being made about what type of project is required to address their priority need.

5.3. 2. Community Engagement in the Implementation Phase

Community based projects work best when all involved professionals and local people feel that their concerns are being addressed. Community awareness, usually through awareness campaigns and community involvement in project planning and implementation are also important elements in the sustainability of a project.

Many scholars suggest active community participation at all levels of project design and implementation (Bamberger & Cheema, 2007) for sustainability of projects. Locally initiated projects may be more sustainable (LaFond, 2005), so it might be necessary to develop some level of local institutional building (Bossert, 2014). Involving all relevant community leaders and agencies facilitates sustaining projects (Goodman & Steckler, 2009; Shediac-Rizkallah & Bone, 2008). Sustainability cannot be achieved without their involvement and support and thus, stakeholder analysis is paramount to be able to identify the key actors who should be involved in every stage of project cycle. Stakeholders, both men and women, should actively participate, hence having the opportunity to influence the direction and detail of design and implementation.

5.3.3. Community Engagement in the Monitoring and Evaluation Phase

Monitoring of projects by relevant bodies is essential and of greatest benefit because of the improved insight they provide concerning project completion status. The best-laid project can go awry if not properly monitored. Through proper monitoring, delays can be readily identified, periodic reports that are made is also very helpful. There must be professionally qualified personnel appointed to monitor the progress of the project, usually the Monitoring and Evaluation team.

A Project is considered to be successfully monitored and evaluated if it, among other things comes in on-schedule (time criteria), comes in on-budget (monetary criteria), achieves basically all the goals set for it (effective criteria), is accepted and used by the clients for whom the project is intended (client satisfaction criteria) (Institute, 2013). Thus, for any project in any area to be considered successful, the criterion of time, efficiency, effectiveness and quality delivery among others are to be satisfied. Monitoring and evaluation which is achievable through planned site meetings can help organizations extract relevant information from past and ongoing activities that can be used as the basis for programmatic fine-tuning, reorientation and future planning.

5.4. Recommendations

The recommendations arising out of this study points towards the value that community engagement can bring to project sustainability. Right from project planning and design to implementation and evaluation and monitoring, the community can play a bigger role. The project key players and the community at large should be aware that any commissioned project is like a debt that needs to be re-paid through proper management to ensure attainment of stated objectives.

Community Engagement in the Project Planning Phase

It is recommended that there is need for community members to identify their own needs, analyze the factors that lead to the needs, and draw up community action plans to address the needs. Respect for and the use of community's inherent knowledge and capacities allows the community to cultivate innovative approaches to address their own problems.

Community Engagement in the Project Implementation Phase

Future project by Universities in the community should pay special attention to deep engagement from the targeted beneficiaries and community members. A proper mechanism of proper project communication should be adopted so as to ensure grievances are addressed in time. A template on communication of schedules should also be developed together with a timeline for site meeting and proposed evaluation strategies. A thorough planning and design template should be executed at the begging to ensure that community needs and priorities are captured at the onset. Procurement and budgeting of resources, including human resource should be agreed on, especially in an environment where job opportunities are valuable to the members. In line with this, training and capacity building should be emphasized to enable the community take over the running and management of the project upon completion. This enhances the project sustainability and ensure that the benefits of the project will be enjoyed for a long time.

Community Engagement in the Project Monitoring and Evaluation Phase

It is recommended that before the implementing parties hand over the project to the community, it should design exit plan and sustainability plan to promote continuity of the project after they have left. After the implementing parties have left, the project is now left to the community to spearhead it and the sponsors should only come in for technical guidance as project sustainability is dependent much on the community's full participation.

In conclusion, the study on the project sustainability of community projects in JKUAT has brought to light the causes of failure. Due to the similarities of the public universities in Kenya, it will be very important that the study is replicated in these other universities. These will provide an opportunity for the country to address the problems if indeed they are similar. In the event that they are not, it will be important to have a critical look at the differences and therefore make better and more informed decisions on effects of community engagement in project phases on project sustainability in JKUAT and other public universities in Kenya at large.

5.5. Areas for Further Research

This study concentrated on the effect of community engagement at different project phases on project sustainability in public Universities in Kenya. The study focused on a public learning institution and to allow for generalization, this study recommends that another study be carried out in other sectors in different counties in Kenya for comparison purposes. The study also recommends research to identify the various socio-political factors that negatively affect projects in the planning phase through implementation in Kenya. Further research should be carried out on organization factors that affect implementation of community based projects in the various counties.

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Appendix I: Questionnaire

Dear respondent,

This questionnaire is intended to collect data relating to community engagement and sustainability of JKUAT projects. Kindly respond to all questions to aid the process. Information collected from this questionnaire will be handled with high confidentiality and will strictly be used for academic purposes only by the researcher.

SECTION A: Demographic Information

1. What is your gender?

Male [ ] Female [ ]

2. What is your highest level of education?

Masters [ ] Bachelors [ ] Diploma [ ] Certificate [ ] S e c o n d a r y Level [ ]

Others (Please Specify) ……..……..

3. Name the Project you have been involved in with JKUAT

[ ] Security wall Project [ ] Joint Clean Energy Project (Biogas)

[ ] Any Other Project (Please name it) ……..

4. What is/was your role in the project above?

[ ] Project Manager [ ] Committee members [ ] Community member

[ ] Implementing Staff [ ] Project Sponsor

SECTION B: Project Planning Phase

Please tick (✓) as appropriate

5= strongly agree 4= Agree 3= neither agree/disagree 2= Disagree 1= Strongly Disagree

No.	Extent of community engagement in Planning	1	2	3	4	5
1	Community is involved in identification of projects					
2	Community is involved in setting goals of projects					
3	Community is involved in planning of projects i.e. scheduling of different activities					
4	JKUAT undertakes proper and timely awareness and acceptance campaigns to the local community on proposed project					
5	Community is involved in design of projects					
6	JKUAT engages with the community towards improving community development and welfare					
7	Prior to project planning, JKUAT seeks permission for access to land and other resources from the community					
8	Community involved in deciding on project leadership through representatives					
9	Community makes decisions on labour engagements in project					
10	Lack of consultation with the community stakeholders has sometimes brought differences between JKUAT and the community members					
11	Community makes decisions on project usage/access rules					

SECTION C: Project Implementation Phase

Use the following scale: Please tick (✓) as appropriate
5= strongly agree 4= Agree 3= neither agree/disagree 2= Disagree 1= Strongly Disagree

No.	Extent of community engagement in project implementation	1	2	3	4	5
1	There is good coordination of activities between community and JKUAT during the project implementation					
2	Community is involved in coming up with the implementation plan and coordination of activities in the plan					
3	Community is involved in performing activities of project in accordance with project implementation plan and works schedules					
4	Community is involved in procurement of goods & service in accordance with the prepared budgets					
5	Community and JKUAT frequently review the project procedures					
6	There has been a breach of contract relating to project implementation					
7	Implementation of new projects is a collective responsibility that involves all community members and JKUAT					
8	Physical/economic dislocation and social disorientation of Community by project activities has led to adverse impact on implementation and skewed timelines.					
9	Community is involved in project funding either directly or indirectly					
10	Community is involved in oversight of the funding resources					
11	Implementation process involves coordinating people and Resources, and performing the activities of the project in accordance with the project management plan.					
12	JKUAT has employed some members of the local community as part of its project team					

SECTION D: Project Monitoring and Evaluation Phase

The following scale will be applicable: Please tick (✓) as appropriate
5= strongly agree 4= Agree 3= neither agree/disagree 2= Disagree 1= Strongly Disagree

Indicators ad per Conceptual Framework

No.	Extent of Community engagement in Monitoring and Evaluation	1	2	3	4	5
1	Community form part of Monitoring and Evaluation Team					
2	Community is involved in continuous review of ongoing projects in line with the projects objectives					
3	Community is involved in site meetings where projects progress is monitored and evaluated against the					
4	JKUAT has established communication channel that it uses to send and receive information from the local community					
5	Community is consulted on Project variations					
6	Community is engaged in formulation of effective performance indicators					
7	JKUAT periodically provide timely and accurate reports to the local community members on project progress					
8	Community Participation in monitoring and evaluation eliminates biased individual opinions					
9	Community Participation in monitoring and evaluation enhance effective project review					
10	JKUAT works with the local community representatives to address the local community grievances on projects					

SECTION E: Project Sustainability

The following scale will be applicable: Please tick (✓) as appropriate
5= strongly agree 4= Agree 3= neither agree/disagree 2= Disagree 1= Strongly Disagree

No.	Extent of Community engagement in project sustainability	1	2	3	4	5
1	Community members are involved in decisions regarding the management of project outcome					
2	Project facilities are operational					
3	Community and JKUAT have management structure to manage continual flow of benefits from the project					
4	All stakeholders provide substantive input into problem planning and implementation					
5	Project sustainability a priority for JKUAT sponsored projects					
6	Community leaders and activists influence project sustainability					
7	Training on project sustainability is provided to the beneficiaries					
8	Technical support is provided by JKUAT beyond the project completion period					
9	JKUAT works with the local community representatives to address the local community grievances on projects					
10	Project sustainability has had direct financial benefits to the community					
11	Project sustainability has increased business flexibility within the project environs					
12	Project sustainability has positively improved the communities standard of living					