

**FACTORS INFLUENCING TRANSFER OF RESEARCH KNOWLEDGE TO
PRACTICE: A CASE OF SELECTED PROJECTS AT THE INTERNATIONAL
CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY, NAIROBI COUNTY, KENYA.**

KAREN WAMBUI

**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARD OF MASTER OF ARTS DEGREE IN
PROJECT PLANNING AND MANAGEMENT OF UNIVERSITY OF NAIROBI**

2018

DECLARATION

This research project report is my original work and has not been presented to any other examination body. No part of this research should be reproduced without my consent or that of University of Nairobi

Signature.....

Date.....

KAREN WAMBUI KIMANI

Reg No: L50/69857/2013

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

Signature

Date

MS. NAOMI MUTUNGA

Department of Open Learning

University of Nairobi

DEDICATION

I dedicate this research project to my wonderful husband Mr. Josphiah Kamau for his unfailing support, motivation, patience and understanding without which I would not have successfully completed the project.

ACKNOWLEDGEMENT

First, I would like to acknowledge my supervisor, Ms. Naomi Mutunga, for the utmost effective guidance and support throughout the preparation of the project, her great guidance, insightful input and constructive criticism shaped this work.

I would also like to thank all my lecturers for their enormous contribution in class sessions. I wish to also acknowledge the University of Nairobi for the support accorded to me through the Master's Degree course.

TABLE OF CONTENT

DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
LIST OF FIGURES.....	x
ABBREVIATION AND ACRONYMS.....	xi
ABSTRACT.....	xii
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.10 Definition of significant terms used in the studies.....	7
1.11 Organization of the study.....	8
CHAPTER TWO.....	9
LITERATURE REVIEW.....	9
2.1 Introduction.....	9
2.2 Transfer of Research Knowledge into Practice.....	9
2.3 Organization Strategies and Transfer of Research Knowledge into Practice.....	11
2.4 Management Commitment and Transfer of Research Knowledge to Practice.....	14
2.5 Knowledge Transfer Skills among the Researchers and Transfer of Research Knowledge to Practice.....	16

2.6 Community Involvement and Transfer of Research Knowledge to Practice	18
2.7 Theoretical Framework.....	19
2.8 Conceptual Framework.....	20
CHAPTER THREE	24
RESEARCH METHODOLOGY	24
3.1 Introduction	24
3.2 Research Design	24
3.3 Target population.....	25
3.4 Sample Size and Sampling Technique	25
3.4.1 Sample Size.....	25
3.4.2 Sampling Technique	26
3.5 Research Instruments.....	26
3.5.2 Validity of Research Instruments.....	27
3.6 Data Analysis Techniques	28
3.7 Ethical considerations.....	28
3.8 Operationalization of variables.....	29
CHAPTER FOUR	32
DATA ANALYSIS, PRESENTATION AND INTERPRETATION.....	32

CHAPTER FIVE	45
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS.....	45
<i>APPENDIX 1:Research questionnaire for icipe employees</i>	<i>64</i>
<i>APPENDIX 2:Krejcie and Morgan Table</i>	<i>73</i>

LIST OF TABLES

TABLE 2.1 KNOWLEDGE GAPS.....	22
TABLE 3.1 TARGET POPULATION	25
TABLE 3.2 SAMPLE SIZE.....	26
Table 3.3 Operationalization of variables.....	30
Table 4.1: Distribution of respondents by gender.....	33
Table 4.2: Distribution of respondents by age.....	33
Table 4.3: Respondents level of education.....	34
Table 4.4: Respondents' Experience at/with ICIPE.....	35
Table 4.5: Transfer of Research Knowledge into Practice.....	36
Table 4.6: Organization Strategies and Transfer of Research Knowledge into Practice.....	37
Table 4.7: Management Commitment and Transfer of Research Knowledge into Practice.....	38
Table 4.8: Knowledge Transfer Skills and Transfer of Research Knowledge into Practice.....	40
Table 4.9: Analysis of the Impact of Community Involvement on the Transfer of Research Knowledge into Practice.....	41

Table 4.10: Community Involvement and Transfer of Research Knowledge into Practice; Communities' perspective.....	44
Table 5.1 Contribution to body of knowledge.....	55

LIST OF FIGURES

Figure 1 Conceptual Framework.....	21
------------------------------------	----

ABBREVIATION AND ACRONYMS

ICIPE International Centre of Insect Physiology and Ecology

ABSTRACT

This study aimed at establishing the factors that determine the transfer of research knowledge to practice with reference to the International Centre of Insect Physiology and Ecology, Nairobi County. The study was informed by the following objectives; to determine how organization strategies influence the transfer of research knowledge into practice, to establish how management commitment influences the transfer of research knowledge to practice, to determine how the knowledge -transfer skills among the researchers in the organization influence the transfer of research knowledge into practice and to determine how community involvement influences the effective transfer of research knowledge into practice. All these were studied in relation to the International Centre of Insect Physiology and Ecology, ICIPE, Nairobi. The project was based on the Knowledge Theory which focuses on the intersection between beliefs, truth and justification, as well as the Performance Theory whose rationale is that humans are able to make extra ordinary accomplishments, produced from high level performances. It also highlighted other authors' insights on the factors that determine the effective transfer of research knowledge into practice with reference to ICIPE. A descriptive survey design was adapted seeing that the variables under investigation could not be quantified but could only be described in descriptive statistics. Using the Krejcie & Morgan Table (1970), a total of 106 respondents were selected from a total population of 150 people, picked from selected projects in the institution. Data was collected through the administering of a questionnaire to the respondents. Quantitative and qualitative techniques of data analysis methods were used to analyze the collected data through the use of SPSS software. Data was presented using tables to make the data more reader friendly. Ethical issues related to the study were addressed by maintaining high level confidentiality of the information volunteered by the respondents. The study found out that transfer of research knowledge was taking places and significant changes were noted from this with 60% agreeing to this. It also established that organization strategies, management commitment, acquiring of research knowledge transfer skills and community involvement all positively influenced transfer of research knowledge with each having a composite mean of 1.98, 2.2, 2.36 and 2.37 respectively. The study concluded that organization strategies put in place and management commitment encouraged transfer of research knowledge to practice, knowledge transfer skills were necessary for effective transfer and community involvement was key as created a sense of ownership of the project thus commitment to it even past the project life. The study recommended awareness creation of existing knowledge transfer objectives, the merging of related projects at point of research knowledge transfer, the allocation of more time and resources by project managers towards knowledge transfer activities, the equipping of the project teams with the necessary knowledge transfer skills, the involvement of the communities in all stages of the project and the intensification of follow-up activities post end of the project. Areas of further research work include the establishment of other factors influencing the transfer of research knowledge, the impact of effective involvement of communities in transfer of research knowledge into practice and the ways of improving management commitment for effective transfer of research knowledge.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

There is an increased demand to have research knowledge translated to practically usable technologies by the societies to cause a significant impact in the livelihoods of people. There is a lot of available knowledge usually stemming out from formal research but very little has been put into active use. Research findings are not normally shared with the intended research beneficiaries and for this reason a gap or discontinuity exists between research and practice. Researchers seem most interested in advancing research rather than improving practices whereas the research audiences are more interested in improved practices, stemming out as a result of research. The gap between research and practice can therefore be to a large extent attributed to the different priorities (Greer, 2013).

Research is an important aspect of our day to day lives. The reason behind conducting research is to increase the levels and degrees of knowledge and as a result also significantly contribute to the development of humans (Oduwaiye, Owolabi & Onasanya 2009). Research cannot be done away with seeing that it contributes to the existence and advancement of high standard debates in the society through the identification of problems and the establishment of general principles and concepts based on sober arguments that are to guide the process of development (Court and Young, 2006). Besides, research is important in the solving of concrete problems by providing concrete solutions.

For research to effectively contribute to human development then there ought to be a means to transfer the results available so that the concrete solutions to human problems are adapted to the day to day lives of people. The transfer of research knowledge is therefore an important part of the process of research entailing the clear communication of the results of research to the population that the research targeted (Burns, 2005). When knowledge is transferred, and efforts are exchanged then knowledge is treated as a channel of improving situations and certain practices as a positive impact, rather than having the knowledge as an end itself (Williams

Group, 2003). Some of these positive impacts of transfer of research knowledge include the increased capacity by the communities and the research end users to use the knowledge by applying it to real-life happenings and problems in their very own local context, this in turn improves their livelihood. This goes to prove the fact that a close link exists between improvement in livelihoods and transfer of knowledge (Huberman, 1990). Others include the integration of the research knowledge in decision- making. This creates a cultural shift where both the researchers and end-users understand each other's viewpoints, experiences, language and problems better and thus a collaborative environment emerges, that creates current and relevant knowledge and the continuity of the transfer of knowledge.

In the past years the international development agencies have expanded the portfolios of their activities to extend past providing only financial support for research and development projects and programmes and are focusing more on the degree of knowledge sharing and the development of capacity development. This expansion of portfolios is a response to the need for enhancing development understanding, expressed both within these agencies as well as amongst their constituents and/or partners. (Ferguson, 2005). Past the research work, the donors and development agencies want to be sure that the work done using the financial support offered goes into improving the lives of the communities and having a direct impact.

Past the research and development projects, a lot of academic research work has been conducted globally and over the years. In the United States of America, the Federal Government invests \$147 billion in U.S. research and development, with \$90 billion going to institutions of higher learning to underwrite faculty research projects and the training of graduate students and post-doctoral fellows (West, 2012). However, the transfer of research knowledge has been very little as a result of existing barriers in its creation, diffusion, adoption and utilization by research knowledge users. Early practitioners can learn to apply theoretical knowledge and experiment on it in order to minimize and eventually eliminate knowledge transfer gaps through enhancing industry orientation of academicians and adopting systematic processes of review and dissemination. This will lead to improved performance and competitiveness of firms and improved lives of the general society (Gera Program, 2012).

A significant challenge is that researchers are coming up with technologies and finding suitable uses for this whereas research should be based on existing key knowledge gaps in development matters which would be a firmly anchored strategic approach. Most research undertakings have, as the basis of their research, researchers seeking questions they can answer with the existing methodologies instead of starting with the identification of key knowledge gaps facing development practitioners (World Bank, 2010). A lot of what is happening is a case of technology first and needs last (Norman 2010). What should inform the research agenda is the existing development gaps other than the disciplinary background of the researcher or the preference of methodologies.

The International Centre of Insect Physiology and Ecology, *icipe*, has been conducting research in insect science for over 40 years now with a mission to help alleviate poverty, ensure food security and improve the overall health status of peoples of the tropics. The Centre has a lot of research work that has been conducted by senior scientists and young scientists during their Masters and PHD studies. The Centre conducts research under four thematic areas, being; plant health, environmental health, human health and animal health all with an aim of developing and extending management tools and strategies for harmful and useful arthropods, while preserving the natural resource base through research and capacity building.

The information and results, though very rich and helpful, have not been totally translated to technologies that the end-user can benefit from. However, some very good success stories exist. One key one that has succeeded in transfer of knowledge to the end users to improve their livelihoods is the Push – Pull Technology. The strategy involves intercropping cereals with a repellent plant, such as desmodium, which is supposed to repel or deter stemborers from the target food crop. An attractant trap plant, for example Napier grass, is planted around the border of the intercrop, so as to attract and trap the pests, leaving the food crop well protected from pests.

icipe has also developed integrated pest management (IPM) packages for exotic and native fruit flies. This has been done in collaboration with partners from Europe, Africa, Asia and USA and is aimed at reducing yield losses and the huge expenditure incurred by farmers in order to purchase pesticides. The packages are also supposed to mitigate the health and environmental risks associated with the use (and misuse) of such chemicals. Organizations can improve their

performance and gain competitive advantage through an effectiveness of knowledge transfer, (Susanty, 2012)

1.2 Statement of the problem

The aim of conducting any research work is to have an impact in the society and make a difference, else the information and resource investments would be a waste. Research conducted is able to have a tremendous impact on development initiatives than it has to date (African Development Bank, 2011). Effective knowledge transfer majorly aims at reducing the existing gap between knowledge and practice (Zarinpoush, 2017). For nonprofit organizations the effective transfer of knowledge is an extremely important capacity as it can easily provide the foundation for any activity that attempts to influence practices, policies or behaviors. It is also crucial as provides a base for making the case for support to donors and funders and also in engaging collaboration with other organizations.

Organizations that value transfer of knowledge, implementing good practices to support it tend to substantially improve project outcomes. According to PMI, (2015) they are able to improve performance by over 35%. Research, regardless of its degree of innovativeness, only brings change in the lives of the target communities when, in an appropriate and timely manner, it is disseminated and utilized. Improvements in livelihoods to a bigger extent depend on; the production, transfer and use of knowledge (Huberman, 1990).

It is important for many researchers that the knowledge they create is utilized and has a degree of impact on practices. Sustainable competitive advantage in any area and especially in management depends more on those able to make the best use of any available other than those who just have the information. (Hemsley-Brown, 2004). Any barriers to the transfer of any research knowledge in any organization need to be unearthed and the factors that enhance the process need to be well developed and encouraged. Research results can only be properly utilized if the proper dissemination of the results is done. There is minimal utilization of the research work conducted over time with a lot of the findings lying in bookshelves accumulating

dust, rather than helping the communities. While some information has been helpful, a lot more is yet to be utilized to help improve the livelihoods of communities.

1.3 purpose of the study

The purpose of the study was to establish the factors influencing the transfer of research knowledge into practice in ICIPE.

1.4 Research Objectives.

The research was guided by the below objectives:

1. To determine how organization strategies influence the transfer of research knowledge into practice in selected projects at ICIPE.
2. To establish how management commitment influences the transfer of research knowledge into practice in selected projects at ICIPE.
3. To determine how the knowledge -transfer skills among the researchers in the organization influence the transfer of research knowledge into practice in selected projects at ICIPE.
4. To determine how community involvement influences the transfer of research knowledge into practice in selected projects at ICIPE.

1.5 Research Questions

The below are the research questions that were drawn from the objectives and were applied to guide this study:

1. How existing organization strategies facilitate the transfer of research knowledge into practice?
2. How management commitment influences the transfer of research knowledge into practice?
3. How knowledge -transfer skills among the researchers in the organization facilitate the transfer of research knowledge into practice?
4. How community involvement contributes to the transfer of research knowledge into practice?

1.6 Significance of the Study

This study intends to help the researchers realize the need to transfer the knowledge acquired while conducting research so as to fully make an impact in the livelihoods of the affected communities.

The study was also intended to possibly help the lead researchers while preparing project proposal and documents to incorporate this as an important aspect and thus in turn ensure there was enough budget allocated to knowledge transfer other than just receiving funding for research without a way of transferring the knowledge to impact the communities.

The study was intended to help the management cultivate a culture in research organizations where the persons conducting the research and those who are affected by it develop the capacity to accept the research results and convert them to useable technologies. This would make transfer of knowledge in future a lot easier as both parties would be involved from the very beginning and thus more receptive.

This was also intended to possibly benefit the policy makers as they would realize the importance of receiving research results from the researchers and in turn consult with them before making decisions. This would ensure that decisions they would make and policies they put in place were well informed and thus significant for the people.

This research study was also intended to hopefully help future researchers interested in this area with relevant literature by providing them with a better understanding on the factors that influence the effective transfer of knowledge into practice with reference to the International Centre of Insect Physiology and Ecology, icipe, Nairobi.

1.7 Limitations of the Study

There were some respondents who were unwilling to provide any information. The researcher had to assure the respondents that the research work was purely for academic purposes and their anonymity would be maintained.

The researcher faced some unfriendly organization policies while conducting the study and this caused the respondents not to be willing to provide the information needed from them. The

researcher had to assure the management that the research work was purely for academic purposes and the findings would not be leaked to any external parties.

There were difficulties in accessing some of the respondents due to the nature of their work schedules. The researcher had to contact them in good time and gave them ample time to respond and provide the necessary information. The researcher came up with an online questionnaire where the respondents gave the required information from wherever they were without necessarily having a physical meeting.

1.8 Delimitations of the Study

The study was conducted at the International Centre of Insect Physiology and Ecology, *icipe*, Nairobi campus. The study focused on projects in the Plant Health and Environmental Health thematic areas. The targeted personnel in the projects were the researchers, here being the Senior scientists, the Post-Doctoral fellows and the African Regional Postgraduate Program in Insect Science (ARPPIS) scholars. The objective of the study was to find out the factors influencing the transfer of research knowledge into practice and it met its objective by getting the required information through questionnaires used to complete the study.

1.9 Basic Assumptions of the Study

The respondents would be available, willing and able to respond to the questionnaires in an honest manner giving correct and accurate information.

1.10 Definition of significant terms used in the studies

Community Involvement	The process of engaging in dialogue and collaboration with community members.
Knowledge-transfer skills	Ability of members of an organization or a research team to organize and distribute knowledge acquired in an area of study to the communities and policy makers in a user-friendly format.

Management Commitment	The level of direct participation of the top project management in all specific and critical aspects pertaining to particular areas in an organization.
Organization Strategies	Measures put in place by an organization to create a conducive environment for the achievement of certain objectives.
Transfer of Knowledge	Organizing and distributing knowledge acquired in an area of study to the communities and policy makers in a user-friendly format.

1.11 Organization of the study

The study was organized in five chapters where chapter one consisted of the background of the study, statement of the problem, objectives of the study, significance, limitations and delimitation of the study. It also included definition of terms and the organization of the study. Chapter Two included literature review that considered the works of previous researchers who had made studies in the same area, critical review and the summary of the study. It also included the conceptual framework. Chapter Three discussed data collection procedures and the tools used in obtaining data including the research methodology, research design, target population, sampling size and sampling technique, Data collection instrument, Data analysis and ethical consideration. Chapter Four included data analysis, presentation and interpretation while chapter Five will included the summary of findings, discussions. conclusions and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains relevant literature from other researchers who have done research in the same area before. It aimed at identifying and evaluating opinions, knowledge and findings of various studies that have been carried out in the past in this area, highlighting the important issues and practical problems so as to determine the current facts. The chapter is organized in various sub topics that look at the transfer of knowledge in relation to the organization strategies put in place, management commitment to the transfer of knowledge, the knowledge transfer skills of the researchers and the community involvement. It also contains the theoretical theories used, the conceptual framework as well as identified the existing knowledge gaps.

2.2 Transfer of Research Knowledge into Practice

Transfer of Knowledge is the conveyance of knowledge from one person, place or ownership to another. It is about identifying already existing accessible knowledge, getting it and in turn applying the knowledge to develop new ideas or improve on the existing ideas to make an action or a process better, faster or safer than it would have originally been (Christensen 2003). It involves organizing and distributing knowledge acquired in an area of study to the end users of the information.

Research is systematically used to provide solutions to problems. As this is carried out, then one is able to acquire facts, information, and skills that provide a theoretical or practical understanding of a given subject. Research is what helps the advancement of human life as the gain of knowledge leads to thriving (Simboli, 2016). Research knowledge helps societies understand various issues and happenings in life, support truths and challenge lies as well as aid in the success of business and various other aspects in life. Research knowledge therefore forms an important part of our day to day lives.

However, knowledge only leads to thriving when it is used in the right manner for the benefit of the society. Knowledge transfer involves both the sharing of knowledge by the knowledge source

and the acquisition and application of knowledge by the recipient (Wang and Noe, 2010, p. 117). In business, for example, knowledge creates a competitive advantage by enabling an organization to make better, well informed decisions and effectively compete therefore very instrumental in improving organization performance (DeFillippi et al., 2006). However, it is only when knowledge is used in decision making, in solving problems and in producing effective performance that it is able to create a competitive advantage. Therefore, knowledge application is deemed successful not only when knowledge is transferred but when it is well adopted and utilized as well.

Increasingly, scientific knowledge is expected to move from laboratories, institutes and universities, to industries so as to increasingly contribute to innovation and in turn to the economic growth and sustainability of the same. As a result of this the policy-making communities look very confident in the ability of science to produce innovation. The Europe 2020, European Union 's policy document is a great example. In the document, to enable the strengthening of the overall economy of the Union, research and development (R&D) is given a key role. The take-home messages generated, should be appropriate to the decision-making environments where they are directed (Lavis et. al., 2003). For example, the research ethics boards, need to begin assessing not just the front end or the proposal of research but the back end of the research as well. This will help ensure that research results are converted to user friendly format depending on the audiences and shared accordingly.

For knowledge transfer, passive processes should be avoided as they are ineffective. Instead, more active process that involve interactions should be adopted regardless of the target audiences. For example, research undertaken on the transfer of research knowledge to and its adoption by clinical audiences has shown that interventions like academic detailing and opinion leaders appear to be effective in many settings (Grimshaw et al. 2001). In theory, it is deemed that interaction can introduce bias into research studies if researchers are pressed by decision makers to carry out research in ways that are likely to yield results that favor the decision makers' preexisting beliefs or positions (Innvaer et al. 2002).

2.3 Organization Strategies and Transfer of Research Knowledge into Practice

For transfer of knowledge to take place, an organization must have specific plans put in place of what will be done, how and when, so as to achieve the desired results. That creates an enabling environment for the activities to take place, otherwise knowledge will be available and nothing much will be done about it. Organizations ought to first understand their strategic objectives and the businesses they serve, then shape their capabilities accordingly. (Kessler and Kates, 2010). If the organization is limited in an area of operation, then they are not able to make the necessary strides towards their success. Strategies must be suitable based on what the core businesses of the organization.

The goals and the objectives of the organization form an important part of any organization. An essential step is the setting of goals and objectives for projects because they help identify your destination, here being the desired outcome, and provide a road map of how to get there, which is an effective workplan. Goals aid in directing actions and efforts toward activities related to the goals and moving actions away from any activities that are unrelated. They also work at energizing employees for their tasks and affects persistence. Goals also motivate employees to use any existing knowledge they have to attain a given goal or also to get the knowledge needed to attain a given goal by improving themselves (Locke and Latham, 1990). Employees are also able to monitor their own progress, through clear goals and objectives, all year round and amend their efforts where necessary. If employees understand what they are expected to accomplish then it becomes easy for them to deliver appropriately.

Goals also act as a motivation to the employees or researchers in an organization. People are motivated by goals to use the existing knowledge to help them in attaining the goal or to find out what knowledge is needed to do so (Latham, 2004). An organization that has a goal on transfer of knowledge then is able to pursue this a lot easier than one that does not have. If the goal is transfer of knowledge, then specific measures and action points are put in place to facilitate this. It then becomes something that the organization or a project gauges their performance on.

Financial independence is also a major strategy in most organization. These is where an organization seeks to diversify its funding sources. Pfeffer and Salancik's (1978) Resource

Dependence Theory states that when resources are threatened, organizations tend to adopt strategies that ensure their continued existence whereas where resources are certain and abundant, then external dependency is not problematic. Most scientific research is funded by government grants, non-profit foundations like the Breast Cancer Research Foundation and the David and Lucile Packard Foundation and companies doing research and development.

Science funding has changed over the years. Historically, science was majorly supported via private patronage that is the backing of a church sponsorship or through a prominent family or person, or simply through individuals paying for the research themselves. For example in the 16th and 17th centuries, Galileo's work for was supported majorly by wealthy individuals, including the Pope. In the present, researchers are likely to be funded by a mix of grants from various institutions, foundations and government agencies, (Lesser, Ebbeling, Goozner, Wypij & Ludwig, 2007). The scarcity of resources available for investing in research is the reality that is currently facing federal agencies is that the resources available for investing in research are limited and they argue that there is a need for better quantitative and systematic models that relate to funding inputs to a variety of significant scientific outputs (Rosenbloom, 2015). The funding landscape and funding criteria massively changed due to the collapse of the financial markets in 2008. The funding sources have since diversified and include community development finance institutions programmes, venture philanthropy, related investments, equity investments, bonds, loans and several other financial instruments.

In a perfect world, scientific studies regardless of the funding source would be completely objective and therefore money would not matter. However, in the real world, all the consequences of revenue diversification are not positive. While organizations may ensure their basic survival by finding multiple funders, funding may introduce biases as well as conflicting objectives of the various funding bodies. This has an impact on the outcome as well as the transfer of knowledge. While some only fund for research others would care about the transfer of knowledge. The organization would have to deal with the tension of their own desire for autonomy and meeting the requirements for accountability for each funder (Lesser et al. 2007). Others like those in the private sectors are focused on making profits therefore would only be willing to fund where they can gain.

Integration strategy is another aspect and involves the consolidation of various research components especially those that work on related ideas or research components. Years of research on systematic reviews have proved that a systematic review of all available studies can often lead to a conclusion very different from that of individual studies (Egger and Davey Smith 1997) For example, a metanalysis of more than 38 million patients in 26,000 hospitals found that patients treated in non-profit hospitals had a higher risk of death as compared to a single study conducted comparing the mortality rates of non-profit and profit hospitals which found a lower risk of death for patients treated in profit hospitals (Devereaux et al., 2002).

The research literature highly recommends that organizations in research should not transfer actionable messages from the results of a single study or single research report but from a body of research knowledge (Lavis et al., 2003). An organization that integrates the various research components together is thus able to produce better information for transfer. This also ensures that the internal conflicts on information released are minimized. If researchers work in isolation, then there is a likelihood of information conflict. However, those working together then produce same results to the communities and policy makers. This also ensure information released is well refined thus more accurate.

Concentrated Growth strategy encourages an organization to focus on and upgrade the successful areas in an organization. In business, it is a strategic approach where the business tends to focus on a single product or market thus encouraging the company to invest more time and resources towards the production and marketing of that one product (Business Dictionary). However, in the event of an increase in the level of competition or a drop in the market then this easily leads to the risk of significant losses. It is however a low risk strategy where demand is growing in a stable environment.

In research, it involves the concentration of an organization on research areas that seem to be yielding results and offering the institution a lot of publications and research results and thus publicity comes with it. Concentration strategy has been explained to have three sub-strategies under it, being, market penetration, market development, and product development (Edwards, 2012). The organization thus tends to focus all its energies on any area of study that has achieved

any of the above and thus also secures funding only for related projects. The danger in this is that a lot of the smaller projects are left out, yet they also are likely to have results that would greatly impact and benefit the community.

2.4 Management Commitment and Transfer of Research Knowledge to Practice

The success of any organization and project is to a great extent dependent on the level of direct participation of the management in all specific and critical aspects pertaining to particular areas of operation. A major role of management is to provide leadership to the teams and this cannot be done via remote control. For best results, hands on leadership is required. This type of leadership helps build the trust of the team members who tend to exhibit a greater degree of creative behavior as a result of this. (Neeraj and Rajib, 2017).

To facilitate the transfer of research knowledge, project managers or the leaders of the research teams ought to set and effectively communicate objectives for knowledge transfer from the very beginning. A communicative leader is one who practices participative decision making, engages the employees in dialogue, is perceived as involved and open and actively shares and seeks feedback (Johansson, 2014). As the leaders set the objectives for transfer of research knowledge, they must actively involve their teams from the very beginning. However, as they are still the leaders, then they ought to be actively involved in the structuring process of the objectives, effectively relating them to the project activities and findings and accurately representing the final outputs to the teams. Characteristics of an effective team include collaboration, respect and (O'Daniel and Rosenstein, 2008). Effective communication facilitates all the above and as it is used to communicate the objectives, creates awareness among the team members and a sense to work together. They also become more alert to what the project intends to achieve and thus focus their energies in the right direction from the very onset of the project. These objectives also ought to be constantly reminded to the team members.

Management also ought to motivate researchers to pursue the transfer of research knowledge as they conduct their research work. This can be done using various means as can be either extrinsic or intrinsic motivation (Frey, 2002). The intrinsic motivation is achieved through job satisfaction, where the researcher enjoys the type of work they are doing and also the idea of

transferring the knowledge in a manner that suits their needs. Also, through the satisfaction that the project manager exercises fairness in allocation of duties and handling of the work and also that in achieving the goals for the institution and the project, their own personal goals are achieved. It thus becomes a lot easier to request them to go an extra mile of disseminating the research results. Extrinsic motivation is a construct pertaining whenever an activity is done in order to attain some separable outcome (Ryan and Deci, 2000). It goes to satisfy their indirect needs, for example, there can be incentives give for this or also awards for the best performers in this.

Researchers are majorly motivated by the ability to do curiosity-driven ,high quality research and are de-motivated by constant changes and reviews, lack of feedback from management and difficulty in collaborating with colleagues at different levels(Snape, 2006). Extrinsic motivators such as incentive schemes, salaries, and possible prospects for promotion are not highly considered as motivating factors. As the researchers conduct their work, the de-motivators ought to be well dealt with, this would make them conduct their work even better. As the management give feedback, they could emphasis on the need to transfer the knowledge gained from the high quality, curiosity- driven research work. They can also be provided with an enabling environment for them to work and collaborate with colleagues in different fields, part of these being those skilled in the transfer of research knowledge to the end users in a simplified manner.

Another way management can show support for the transfer of research practice to knowledge is by allocating funds for these activities from the very initial stage. One of the most powerful stages of any planning process is the budgeting and resource allocation stage. Resource allocation refers to the distribution of resources, and in particular finance, for the various activities (Green, 2017). Budgeting implies the more detailed determination of precisely how these funds are to be used. As earlier mentioned international development agencies are now keener on knowledge sharing, after the work has been done. The researchers therefore should include budgets in their proposals for knowledge transfer. The approach to funding nonprofits, and subsequent needs for accountability, differs greatly from how local governments approach funding private sector contractors and subcontractors (Berner, 2010). This makes it a major item to report on and therefore ensures they are accountable for this. Further, allocation of resources

for these ensures that this is done as the funds cannot be re-allocated to any other activity without the approval of management.

The management or project leaders ought to put the right process in place to ensure the knowledge transfer objective is achieved. They should have some monitoring and evaluation strategies set out for this. A good basis for identification of obstacles faced, lessons learned, and accurate reporting is measuring the degree to which a strategy, intervention or policy has achieved its objectives. Aid agencies, in order to satisfy the wide range of stakeholders, are required to conform to stringent project reporting requirements. Reporting processes are believed to be informed by Project monitoring and evaluation (M&E) information systems (IS). (Crawford, 2003).

2.5 Knowledge Transfer Skills among the Researchers and Transfer of Research Knowledge to Practice

Job satisfaction affects one's state of mind and feelings and is individualistic. (Adeyoyin, 2015). This is what has happened to a lot of the researchers. They have great satisfaction in what they do, research, and a lot of the researchers are specialists in their areas of research. For example, if they are scientific researchers then they are extremely good at what they do. As a result, they have not developed a passion for the transfer of the research knowledge and therefore just end it at the point of making findings and sharing recommendations. For transfer of research knowledge to take place, it is important that the researchers develop interest in the transfer of knowledge.

The researchers need a predisposition to behave in a purposeful manner to achieve specific, unmet needs and the will to achieve, and the inner force that drives individuals to accomplish personal organizational goals (Society of HRM, 2009). This can be both internally developed by the individual or externally motivated by either the employer or the donor. This is the only way possible to get the researchers to participate in knowledge transfer activities.

Another likely challenge might be the lack of expertise in the particular area of transferring knowledge, where the researchers do not have the expertise required to transfer research knowledge to useable material for the end users. This can easily be addressed through workplace learning that can be used to develop skills and build competency among the individuals so as to be able to attain the organizational goals (Smith, 2009). Workplace training also saves a lot on the employer's time and can be customized to suit the needs of the organization. The training can also be external, and this also provides an opportunity to interact with others in the same field.

The training would help them be able to develop messages targeting different audiences from their research work. Transfer of knowledge can only be achievable and successful if, from the beginning, every project team member has a common understanding of exactly what the team wants to disseminate and why they want to disseminate. (Harmsworth et al. 2000) For example the message going out to farming communities, to extension / field agricultural officers and to the policy makers. It is important to give out a message to all the affected parties, but the message should be broken down to their specific level. The language used for this and also the presentation method used for the various recipients should be able to communicate the research results in the best way possible while at the same time preserving the original meaning.

Another measure that would be put in place to ensure that the knowledge transfer skills do not become a hindrance to transfer of research knowledge is to diversify the various research teams so as to have various people handling various themes. A good example would be to have a communications professional as part of the team, so they can help with the preparation of the dissemination materials. This way, the researchers work together with the communication team as well as with technicians that are able to breakdown the research results for the end-users. As this is done then risk is spread out. (Harmsworth et al, 2000)

Organizations by utilizing teams and teamwork across and within corporate boundaries are highly advantaged. Core characteristics make it easier for the achieving of success. Additionally, a heterogeneous team composition creates opportunity to optimize quality, efficiency, and innovation. (Holtzman, 2011). Organizations can easily achieve competitive advantage, overcome internal resource limitations and maximize chances for long-term survival by

collaborating. This is exactly what would work for a team that needs to transfer research knowledge. They gain a competitive advantage.

2.6 Community Involvement and Transfer of Research Knowledge to Practice

The community in any research could cover a wide scope, here community representing any other persons that are involved in the research process other than the researchers themselves. In various sectors, the communities involve the policy makers, the direct workers in the specific fields as well as the end users or beneficiaries. The end users vary depending on the sector, for example, in the agricultural sector, these are the farmers while in the health sector, they are the patients. Stakeholder theory (Donaldson & Preston 1995) indicate that organizations explicitly manage their relationships with different stakeholder groups as they have a direct impact on the performance of any organization.

The involvement of all these parties in the research work has an impact on the transfer of the research knowledge into practice. Their involvement could be at various stages of the project and at various levels for example through consultations, collaborations and user led or controlled (Auckland, 2010) Researchers need to therefore actively involve them to achieve desired results.

The community can easily be willing to get involved if the organization conducting research has been deemed credible in the past and thus have a good reputation. The good name makes it easier for the communities to trust them. The credibility is built up from past results released that were of great benefit and from past research work that has not been harmful to the communities. Unless the communities can trust the organization then, there will be resistance, however when the organization is credible then they can work among the communities for years. (Lavis et.al., 2003). A lot of donors also tend to fund projects and research work that is conducted by credible institutions as then there will be better results and more impact in the long run.

Another important aspect to be considered is where the research conducted for the benefit of the community is need base research. In this kind of research, the researcher seeks to solve already existing issues in the currently existing communities. Just because the research works for a different area or field, does not necessarily mean that it would be of any benefit to another community. It is therefore important for the researchers to conduct need assessment tests and

baseline studies before starting off a research on a specific area. Need base research tend to have more impact on the community as they are relevant and therefore such studies are more welcome. This would mean the work of conducting the transfer of knowledge is made a lot easier, first because the communities were involved from the onset and also because they believe the results are of benefit to them as they address their specific needs.

Community involvement from the very beginning of a project also ensures the building up of relationship between the researchers and the communities (Oduwaiye, 2009). This gives the researchers a sense of belonging and the communities a sense of ownership. In such environments where both parties are comfortable with each other and relationships are built up, then it is easier to transfer the research knowledge to practice. In a situation where the communities are not involved then at the end of the research the researchers try to implement some of the outcomes of the research, they are likely to be faced with a lot of resistance and hostility. The relationships provide a better environment for the transfer of research knowledge adding both the adaptability and sustainability of the same.

2.7 Theoretical Framework

The research was based on two theories the first being the Theory of Knowledge. In elaborating the theory of knowledge (TOK), philosophers usually talk of epistemic justification and epistemology.(Henriques, 2011). These justifications refer to the intersection between belief, truth and Justification. The beliefs here are one's mental representation of the world, the truth is the actual state of the world, and justification is the relationship between the two. This brought to perspective the idea of research knowledge as this seeks to bring together the beliefs of people and the actual state of the world through the truths. Once these are justified any found results become easily acceptable to the people. However, this theory can also work to the detriment of the transfer of research knowledge. Sometimes the beliefs of people tend to overrule their judgement even when presented with alternative facts (Landesman, 1980).

The Theory of Performance (ToP) develops and relates six foundational concepts, i.e. a performer, performer's mindset, to perform, the level of performance, immersion in an enriching

environment, and to engage in a reflective practice, to form a framework that is used to explain performance and performance improvements (Elger, 2007). The rationale behind the theory is that humans are capable of extra ordinary accomplishments and these are produced from high level performances. The higher the level of performance in research, the better the research accomplishments and thus the more the need to transfer the research knowledge as this will help improve the livelihoods of people, which is a major reason why research is conducted in the first place.

2.8 Conceptual Framework

Conceptual framework consisted of concepts that were placed within a sequential and logical design so as to clarify the concepts and propose the relationship among concepts in a study and also provided a concept for interpreting the study findings. This part provided a schematic presentation of the relationship between the variables under investigation.

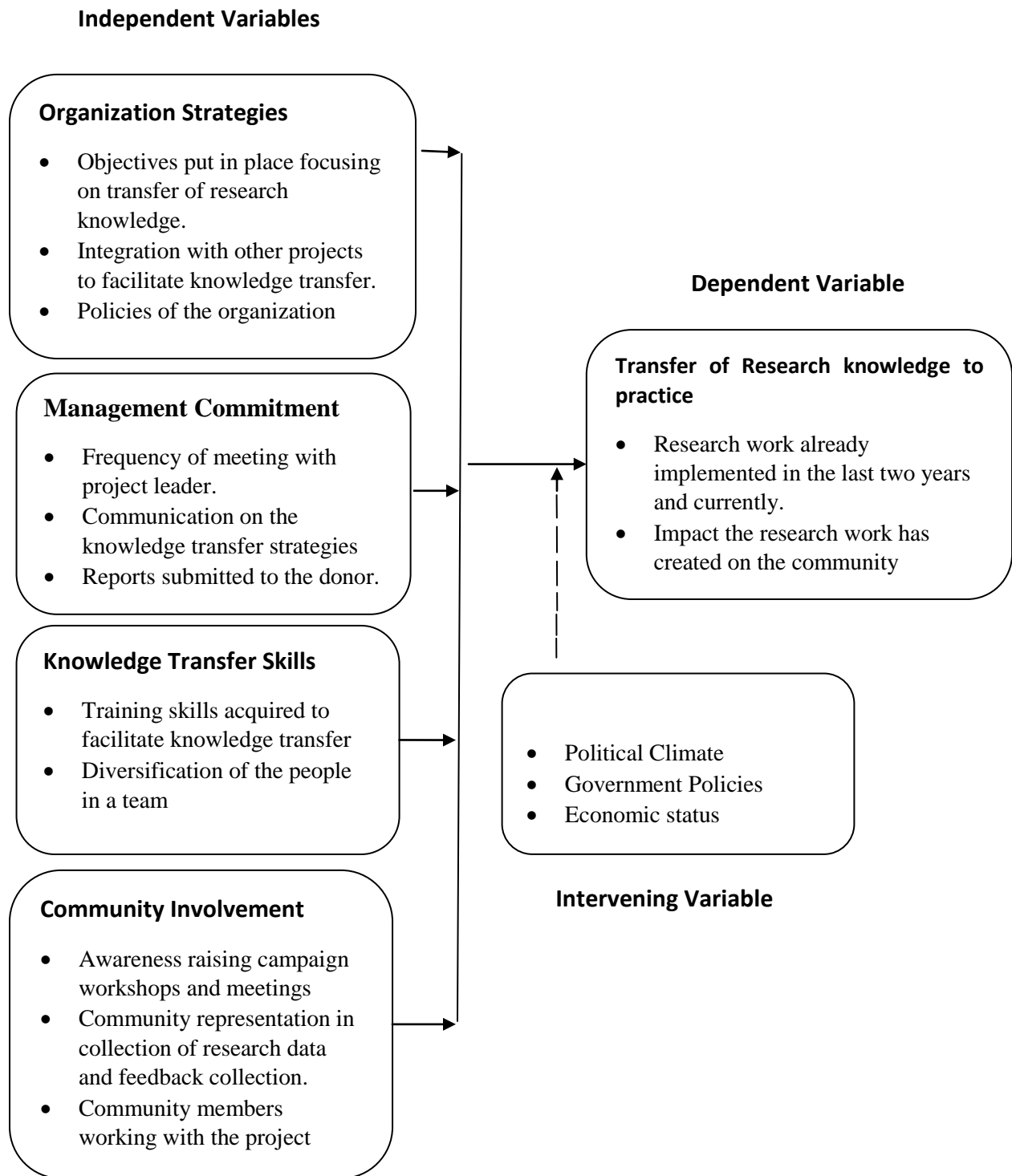


Figure 1 Conceptual Framework

2.9 Knowledge Gaps

The below were revealed as possible knowledge gaps that the study would look at addressing.

Table 2.1 – Knowledge Gaps

Variable	Author and Year	Findings	Gap
Transfer of research knowledge to practice	Becheikh, 2010	Knowledge transfer is critical to advance practices and policies and is dependent on or is easily broken down to three major categories; determinants related to transfer mechanisms, those related to the actors involved in the process (i.e., researchers, linkage agents and practitioners) and determinants related to transferred-knowledge attributes.	Intervention of linkage agents are essential in order to adapt the knowledge produced by researchers and to make it easier for practitioners to adopt and use it.
Researchers skills in the transfer of research knowledge to practice	Susanty Et al (2012)	Concluded that the organization structure and culture were major factors influencing the transfer of knowledge	Of the opinion that the employees ought to learn other skills other than those they are working on. For example in their study, there were well skilled in sewing but that was it. Need to look into the diversification of skills in the transfer of research knowledge.
Management	Parrido &	Factors affecting individuals	These factors need to be

commitment to the transfer of research knowledge to practice	Garrido (2012)	participating in knowledge transfer activities are; personal and professional factors, institutional factors like research group experiences, social networks e.g. interactions with researchers in private companies and recognition e.g. funding benefits.	viewed from both an institutional and individualistic point of view and the two compared. Also comparison between various organizations and regions would probably yield different results.
Community involvement in transfer of research knowledge to practice	Ozga (2004)	Research in education and other areas might not always produce actionable knowledge and also there is need to look at the widest impact on a maximum scale and the replicability of the studies to other areas.	Need to look into the processes that seek to support Knowledge Transfer to practice among communities as this should not be linear, should be practical and replicable.

2.10 Summary of the Literature

The chapter looked into various literature that were relate to the transfer of research knowledge to practice and observed various opinions held by various authors and referring to various circumstances. The literature well informed the study being conducted and gave a view point from other researchers on the same. The conceptual framework also helps relate the variables of the study and give a clearer picture of what is likely to be achieved in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter allows the researcher to describe the general methodology applied in conducting this research project. It describes the data collection procedures and the tools used in obtaining data that was used in this research. The research design, population and sampling design, data collection methodology, validity and reliability of instruments, research procedures, data analysis methods and ethical considerations.

3.2 Research Design

The research design provides guidance on the way the study should be carried. It also ensures that one is able to unambiguously and in a logical manner able to address the research problem from the evidence obtained from a research work. It is a master plan that specifies the procedures and methods for collecting and analyzing the needed information (Zikmund, 2003). The study adopted a descriptive research design. This designs is used to provide responses to the queries of what, who, where, when, and how in reference to a given research problem and is aids in obtaining information on the current status of the phenomena, describing what exists in reference to conditions or variables in a situation (Salkind, 2007). Descriptive research designs are used in exploratory and preliminary studies so as to allow researchers gather and summarize information as well as present and interpret data (Orodho, 2003). After obtaining current information from the respondents and coming up with accurate and deeper findings, descriptive design was employed as it guaranteed breadth of information and accurate descriptive analysis of characteristics of the sample which could be used to make inferences about population (Kerlinger, 1993). Some variables could not be quantified and could only be expressed in descriptive statistics. The study covered the factors influencing transfer of research knowledge into practice with reference to the International Centre of Insect Physiology and Ecology, Nairobi County, Kenya.

3.3 Target population

The target population refers to a group of objects, individuals or items from which one obtains samples to be used for measurement (Mugenda and Mugenda, 2003). These comprised of the research staff at *icipe*, that is the scientists and the research technicians, as well as the scholars. The respondents were those involved in the, management, the research and implementation work of various projects. Some community members were also involved though for only one objective in the study. This are represented in Table 3.1.

Table 3.1 Target population

Respondents	Target Population
Senior Scientists	31
PHD and MSc. Scholars	41
Research Technicians	47
Community Members	31
	150

Source: icipe HR records (2017)

3.4 Sample Size and Sampling Technique

The study had to establish a specific sample size to work with and adapt the proper technique to select this.

3.4.1 Sample Size

Sample size is easily defined as a count of individual observations or samples in any statistical setting. The choice of a sample size is critical in the determination of any project. The study sample was determined by the number of respondents under each category of the respondents

where the study settled for different categories. The Krejcie and Morgan (1970) table was then used to select the sample size and is attached as an appendix.

Table 3.2 Sample size

Respondents	Target Population	Sample size	Percentage
Senior Scientists	31	22	20.75%
PHD and MSc. Scholars	41	29	27.36%
Research Technicians	47	33	31.13%
Community Members	31	22	20.75%
Total	150	106	

The table above was deduced from the Krejcie & Morgan Table (1970)

3.4.2 Sampling Technique

Sampling technique is a method of statistically selecting a random or representative subset of a population. It helps estimate the characteristics of the whole population through the selection of a subset of individuals from within a statistical population. Representative sampling is commonly used by the survey-based research where there is need to make inferences from the sample about a population so as to answer the research questions or meet the research objective (Mugenda, 2008). In this research, stratified random sampling was used as it had the advantage of allowing to categorize population according to particular features (Jankowicz, 2000). The respondents in this research were categorized into senior scientists, the research technicians, PHD and MSc. Scholars and the community representatives.

3.5 Research Instruments

Research instruments are the tools by which primary data is collected (Mugenda, 1999). The main tool for data collection used for this research was questionnaires. These provided respondents with a free will to respond to the question posed to them as the questionnaire can never be traced back to them. For the researcher and the respondents, it is considered an essential

tool of communication. (Gauthier, 1979). It is a set of few questions asked in a written format and in a logical sequence. The respondents were required to give brief and direct answers. The questionnaires contained both closed and open questions. The selection of data was guided by the objective of the study, nature of the data to be collected and the available time.

3.5.1 Pilot Test

Pilot testing is used to test the validity and reliability of the instrument and is done by administering the research instrument to a selection of people in the target population but not included in the sample size. (Mugenda & Mugenda, 2003). This helped the researcher check if the design of the questions was easy to understand and clear, logical, exhaustive and duration taken by each to respond to the questionnaire. This also allowed the researcher check whether the variables that would be collected could be analyzed and processed. The pre-testing was carried out on a sample consisting of 10% of the respondents in this case 11 people and questions found to be misinterpreted were rephrased so as to have the same meaning to all respondents. Respondents during pre-testing were also allowed to give their views on the questionnaires and this were taken into account before administering the questionnaire.

3.5.2 Validity of Research Instruments

Validity has to do with whether the instrument is measuring what it is intended to measure. It is concerned with whether the findings, from the research work, are really about what they appear to be about (Saunders et al, 2009). The meaningfulness and accuracies of inferences drawn from study findings were tested here. (Mugenda and Mugenda 2003). The results from the research will actually represent the study variables if the instrument is valid.

The entire target population was literate, and it was therefore easy to respond to the questions posed to them seeing also that they were informed on the issues under investigation.

3.5.3 Reliability of Research Instruments

Instrument reliability is a way of ensuring that any instrument used for measuring experimental variables gives the same results every time. It shows if the research tool is consistent and stable hence predictable and accurate. It refers to the extent to which the data collection techniques or analysis procedures yields consistent findings (Saunders et al, 2009). This ensures data collection and analysis is not subject or observer biased and erroneous given that sometimes the data may

have some error due to the tool used. It ensures that the area of study can answer affirmatively the questions posed and to check whether one's study is reliable.

A pilot study was conducted by using the test – re-test method and use of Cronbach statistical tool to measure reliability of instrument and internal consistency. The Cronbach's coefficient alpha was used. The alpha value ranges between 0 and 0.7, and reliability is found to decrease with drop in value. The Cronbach alpha was not below 0.6 and thus the reliability of the questionnaire was considered okay and therefore the tool of research needed no amending.

3.6 Data Analysis Techniques

Data analysis involves the systematic searching and arranging of filed data, notes and other materials obtained from the field so as to increase one's understanding on the subject and to enable one present the same to others (Orodho, 2003). The process started immediately after data collection and ended at the point of interpretation of the processed results (Obure, 2002). It included sorting of data, rearrangement of questionnaires, editing to identify errors that might have occurred during data collection and data cleaning to check for completion and accuracy. The Statistical Package for the Social Sciences (SPSS) software was used to run descriptive statistics such as percentages, mean and standard deviation, as it was able to handle large of amounts of data, was efficient and is designed purposively for social sciences (Martin & Acuna, 2002). This helped present the quantitative data in form of cross tabulation tables based on the major research questions. The qualitative data generated from the open-ended questions was categorized in themes as per the research objectives and reported in narrative form along with quantitative presentation. The data in totality was analyzed through qualitative and quantitative techniques and the results were presented on tables and figures.

3.7 Ethical considerations

Ethical standards prevent against the falsifying and fabricating data and thus, promote the pursuit of knowledge and truth which is the primary goal of research. Debriefing before research was an important aspect and helped avoid any confusion especially on the purpose of the research. The researcher assured the respondents of confidentiality and also insisted on the need to be truthful in their reporting, without letting their opinion mislead the respondent, which could be a key

source of biasness in any given research (Gronhaug, 2006). Professional integrity was also a major consideration, and this is where the professional consistently and willingly practiced within the guidelines of the mission of a given profession under the obligation of a Code of Ethics (Furbank, 2006).

3.8 Operationalization of variables

Operationalization of variables entailed the process of describing the operations that the research intended to apply in the measurement of the study variables (Mugenda and Mugenda, 2003). It is the process of strictly defining variables into measurable factors, allowing them to be measured, empirically and quantitatively.

Table 3.3 Operationalization of variables

Objective	Type of Variable	Indicator (s)	Measurement	Measurement Scale	Statistical Formula
To determine how organization strategies influence the transfer of research knowledge into practice in ICIPE.	<u>Independent variable</u> Organization Strategies	-Objectives put in place focusing on transfer of knowledge. -Integration with other projects to facilitate knowledge transfer.		Nominal Ordinal	Descriptive statistics: Frequency, mean and SD
To find out how management commitment influences the transfer of research knowledge into practice in ICIPE.	<u>Independent variable</u> Management Commitment	-Project team meetings. - Reports prepared to show progress on the project objectives.		Ordinal Ordinal	Descriptive statistics: Frequency, mean and SD
To determine how the knowledge -transfer skills among the researchers in the organization influence the	<u>Independent variable</u> Knowledge – Transfer skills among the researchers	-Trainings provided on knowledge-transfer skills. - Diversification of		Ratio Nominal	Descriptive statistics: Frequency, mean and SD

transfer of research knowledge into practice in ICIPE.		research teams.			
To determine how community involvement influences the transfer of research knowledge into practice in ICIPE.	<u>Independent variable</u> Community involvement	-Awareness campaign workshops and seminars held. -Community representation in collection of research data and feedback collection. -Community members working with the project		Ratio Ratio Ratio	Descriptive statistics: Frequency, mean and SD
Transfer of research knowledge into practice; ICIPE	<u>Dependent Variables</u> Transfer of research knowledge into practice	-Research work or projects implemented. - Level of impact to the society.		Ratio Ratio	Descriptive statistics: Frequency, mean and SD

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter comprises data analysis, presentation and interpretation of the findings. The data presented includes response rate, background information of the respondents and a presentation of findings against each individual objective of the study. The data analyzed and presented was based on the responses to the items in the questionnaire's schedules. Descriptive statistics are used in analyzing the findings of this research project.

4.2 Questionnaire return rate

A total of 106 questionnaires were issued out in the research, being 22 to senior scientists, 29 to PHD and MSc. scholars, 33 to Research Technicians and 22 to Community members. Of the issued questionnaires, 20 were responded to successfully by scientists representing 90.9%, 20 by PHD and MSc. scholars representing 68.97%, 24 by the Research Technicians representing 72.72% and 21 by community successfully representing 95.45%. In total 85 questionnaires were responded to successfully, translating to 80.19% of the sample size. The researcher now had representative data to continue with the analysis of the findings.

4.3 Demographics of respondents

In the general information section of the questionnaire, the respondents were required to indicate their gender, age, the level of education, category of the respondent in the organization and the number of years they had worked and interacted with the organizations so as to facilitate understanding the respondents' characteristics.

4.3.1 Distribution of respondents by gender

The study sought to establish the representation of either gender in the study. There were respondents of both genders that is male and female. Data as regards the gender of the respondents was accordingly collected, analyzed and presented in table 4.1.

Table 4.1: Distribution of respondents by gender

Gender	Frequency	Percentage
Male	52	61.18
Female	33	38.82
Total	85	100

The results of the study as presented in the table above shows that fifty two of the total respondents representing 61.18% were male while thirty three of the respondents translating to 38.82% of the respondents were female. This meant that the research work being conducted under this particular theme had more male involvement than female. This difference between male and female respondents could indicate a lower level of participation of females than male in research matters in general. It also showed that the men were more involved not only with the research work but also with the work taking part at the community level. The men were still taking a lead role over the ladies. However, the one third gender rule advocated for and also entrenched in the Kenyan constitution was starting to develop as no one gender accounted for more than two thirds of respondents in the study.

4.3.2 Distribution of respondents by age

The researcher also sought to understand the age of the respondents. This would give a picture of the ages of people that are involved in the research work and thus give a better understanding also on their take as far as the transfer of research was concerned. The results were as represented in table 4.2.

Table 4.2: Distribution of respondents by age

Age Bracket	Frequency	Percentage
18 – 25 years	00	00.00
26 -35 years	23	27.06
36 – 45 years	39	45.88
46 years and Above	23	27.06
Total	85	100

The results indicated that 00% were between the ages of 18-25 years, 27.06% were between the ages of 26-35 years, 45.88% were 36-45 years and 27.06% were 46 years and above. This showed that the majority of the researchers and community members engaged in the research activities were middle aged. This could be an indication that it takes a bit of time to actively be involved in Scientific research due to the amount of time required for studying. It is also an indicator that majority of the farms are still managed and run by the middle age generation an indication that families are yet to entrust farming activities to their younger people and also the young people might not be interested in the practice as it may not look lucrative enough to them.

4.3.3 Respondents level of education

The researcher also sought to establish the level of literacy of the respondents and this was represented by the level of their highest formal education. This would act as an indication of the respondent's individual capabilities to understand and respond to the contents of the questionnaire and the subject of research. The findings to that were analyzed and presented as in table 4.3

Table 4.3: Respondents level of education

Level of Education	Frequency	Percentage
Primary	05	05.88
Secondary	10	11.77
College	19	22.35
University and above	51	60.00
Total	85	100

Table 4.3 indicates that 05.88% of the respondents had their highest academic qualification at Primary level and 11.77% were at the Secondary level. 22.35% of the respondents accounted for those that had reached College level while 60.00% accounted for those that had attained a University degree and above.

This result indicated that a majority of the respondents who were the Senior Scientists and the PHD and MSc Scholars had reached very high education levels, the highest provided for in the questionnaire as they had attained First Degrees and even higher education. A majority of the rest of the respondents has attained some college education and only very few had attained the secondary level and lower, majority of who are the community members like the farmers.

4.3.4 Respondents’ experience at ICIPE

The study also gathered information on the respondents’ period of interaction with research activities at ICIPE by indicating the number of years worked at ICIPE while for the communities it focused on the number of years worked with ICIPE projects. The results were as represented in table 4.4.

Table 4.4: Respondents’ Experience at/with ICIPE

Experience	Frequency	Percentage
Less than 3 years	13	15.29
3 – 5years	24	28.24
6 years and above	48	56.47
Total	85	100

The results indicated that 15.29% of the respondents had worked and interacted with ICIPE for less than 3 years, 28.24% had worked and interacted with ICIPE for 3-5 years and 56.47% had worked and interacted with ICIPE for 6years and above. This result showed that a high percentage of the respondents had interacted with ICIPE for more than 6 years meaning they had good enough experience and insight in the organization to be able to respond to the subject matter as the time was enough for them to have made some observations on this.

4.4 Transfer of Research Knowledge into Practice

The study sought to investigate the current situation as far as the Transfer of Research Knowledge into Practice was concerned. A 5-point likert scale ranging between 1(strongly agree) , 2 (agree), 3 (neutral), 4(disagree) to 5(strongly disagree) was used and the respondents

were asked to give their opinion on the extent to which they felt the research knowledge available was being transferred to the local communities. The results are summarized in table 4.5.

Table 4.5: Transfer of Research Knowledge into Practice

Statements of Participation	1	2	3	4	5	Mean	SD
Research work conducted in the last two years has been shared with the relevant communities, policy makers and agricultural or extension officers.	47 (55.29%)	38 (44.71%)		0	0	1.45	0.5
The recipients are receptive of the information received from the research work conducted.	35 (41.18%)	20 (23.53%)	34 (40.00%)	0	0	1.94	0.88
The recipients confirmed that they are benefitting directly from the results of research work shared.	20 (23.53%)	31 (36.47%)	34 (40.00%)	0	0	2.16	0.78
The researcher observes some changes in the communities based on the research conducted and the results shared.	23 (27.06%)	46 (54.12%)	16 (18.82%)	0	0	1.92	0.68
Research information benefits a wider scale of people than just the community where the work was carried out.	37 (43.53%)	34 (40.00%)	14 (16.47%)	0	0	1.71	0.74
Composite Mean						1.83	

From the results there was an indication that research work conducted in the past two years was being shared with the relevant communities as most respondents agreed with this. All the 85 respondents ranged between agree and strongly agree with a means of 1.45 with majority strongly agreeing. It was noted that majority of the recipients were receptive of the information they were receiving from the research work conducted. 60% agreed with this and the remaining 40% were neutral in their response which was still not negative. Further, the recipients confirmed that they were benefitting directly from the results of the research work. A mean of 2.16 was observed for this with 60% of the respondents agreeing and strongly agreeing. There were also some changes observed in the community following the sharing of the research results, an indication that shared research results was a great benefit to the community. A mean of 1.92 was recorded for this with 81% of the recipients agreeing or strongly agreeing with this fact. Finally, it was observed that the research results once shared, not only benefitted the community where

the research work was conducted but the shared research results were of benefit to an even wider scale of people. The results were an indication that it was beneficial to share the research results not only to the involved community but also with a wider scale of audience as they could also benefit. It was clear that the benefits of sharing outweighed anything else and the results were equally visible.

4.5 Organization Strategies and Transfer of Research Knowledge into Practice

The study sought to establish how existing organization strategies impact on the transfer of research knowledge. It was important to establish if they were already existing organization strategies supporting this and the impact that these have on the transfer of research knowledge. Again a 5-point likert scale ranging between 1 (strongly agree), 2 (agree), 3 (neutral), 4 (disagree) to 5 (strongly disagree) was used and the respondents were asked to give their opinion on the extent to which they felt organization strategies were impacting on the transfer of research knowledge. The results are summarized in table 4.6.

Table 4.6: Organization Strategies and Transfer of Research Knowledge into Practice

Statements of Participation	1	2	3	4	5	Mean	SD
There are clear organization objectives as far as the transfer of research knowledge is concerned	18 (21.18%)	25 (29.41%)	32 (37.65%)	10 (11.76%)	0	2.4	0.95
The objectives on transfer of research knowledge to practice are discussed in the organization	43 (50.59%)	22 (25.88%)	20 (23.53%)	0	0	1.73	0.82
There is integration (merging) of various projects to support transfer of research knowledge	27 (31.76%)	40 (47.06%)	18 (21.18%)	0	0	1.89	0.72
The integration (merging) of various projects to support transfer of research knowledge is effective	10 (11.76%)	49 (57.65%)	22 (25.88%)	4 (4.71%)	0	2.24	0.72
Projects that are already transferring research knowledge tend to receive more support as far as funding is concerned	31 (36.47%)	38 (44.71%)	12 (14.12%)	4 (4.71%)	0	1.87	0.83
Projects already transferring research knowledge receive better organization management support to grow	47 (55.29%)	16 (18.82%)	18 (21.18%)	4 (4.71%)	0	1.75	0.95
Composite Mean						1.98	

From the study results, it was clear that there were organization strategies in place as pertains to the transfer of research knowledge, however it was either not very clear to every respondent or they were not too sure as majority ranged between neutral and agree with a mean of 2.4 though 50% still responded with agree and strongly agreed. Given the standard deviation, one could also tell that the opinions of the respondents were distributed across a longer range with a slightly high deviation from the mean. Majority of the respondents agreed with the fact that organization objectives were discussed in the organization, an indication that it was something considered as very important in the entire organization. The respondents also ranged between neutral and agree when it came to the issue of effectiveness of merging various project to support transfer of research knowledge with a mean of 2.24 and a percentage response of 83.53% to this. Small percentage of the respondents i.e. less than 5.00% did not agree with the fact that merging of projects was an effective strategy. Their opinion was important though formed the minority. Majority of the respondents though agreed that where research knowledge was already being transferred, then such projects would tend to receive more funding support with a mean of 1.87 on this. Finally, it was observed that projects already transferring research knowledge would more easily receive the organization management support to grow. 74.11% of the respondents responded to this by agreeing or strongly agreeing with the same. In essence, the composite mean came in as an indication that majority positively agreed with the fact that organization strategies in place and known across the organization were of benefit to the transfer of research knowledge and that the measures the organization was putting in place like merging of related projects was working.

4.6 Management Commitment and Transfer of Research Knowledge into Practice

The study further sought to establish the effect or impact of management commitment in the transfer of research knowledge on the actual knowledge transfer. Would management commitment and specifically on this subject give better results on the transfer of research knowledge or not? A 5-point likert scale ranging between 1(strongly agree), 2 (agree), 3 (neutral), 4(disagree) to 5(strongly disagree) was used and the respondents were asked to give their opinion on the extent to which they felt management was showing commitment and interest to the transfer of research knowledge. The results are summarized in table 4.7.

Table 4.7: Management Commitment and Transfer of Research Knowledge into Practice

Statements of Participation	1	2	3	4	5	Mean	SD
Project team meetings are held on a regular basis	20 (23.53%)	57 (67.06%)	4 (4.71%)	4 (4.71%)	0	1.91	0.6
Project teams discuss transfer of research knowledge as an objective for their work	23 (27.06%)	40 (47.06%)	12 (14.12%)	10 (11.76%)	0	2.11	0.9
There are follow up measures put in place by the project leader to ensure the transfer of research knowledge objective is implemented	20 (23.53%)	31 (36.47%)	8 (9.41%)	26 (30.59%)	0	2.47	1.1
Sufficient time is allocated to research knowledge transfer activities	31 (36.47%)	20 (23.53%)	8 (9.41%)	26 (30.59%)	0	2.47	1.1
Sufficient financial resources are allocated in the team to support transfer of research knowledge	23 (27.06%)	40 (47.06%)	12 (14.12%)	6 (7.06%)	4 (4.71%)	2.15	1.0
The project leader motivates the team to take part in the transfer of research knowledge	27 (31.76%)	24 (28.24%)	34 (40.00%)	0	0	2.08	0.8
Composite Mean						2.2	

From the responses, the respondents agreed that the project teams had regular team meetings, and this was evidenced by the mean of 1.91 with close to 90.59% of the respondents agreeing to this. There was however a small percentage that was in disagreement with this. It was also evident that the teams would discuss the issue of transfer of research knowledge as an objective in their work with a mean of 2.11 and close to 75% of the respondents agreeing to this. The respondents however were not as strongly convinced when it came to the project leaders putting measures in place to ensure implementation of transfer of research knowledge with a mean of 2.47 and 30.59% of the respondents disagreeing with this fact. There was also a slightly high percentage, 30.59%, that disagreed with the fact that sufficient time was allocated for the transfer of research work. As much as the activity was considered important, a significant percentage was still not allocating sufficient time to the activity. The opinion was equally spread out when it

came to the distribution of resources for the transfer of research knowledge. The majority of the respondents agreed and strongly agreed that adequate funding was being allocated for the activity. However, there was still the minority that had a neutral and disagreeing opinion to this. 60% of the respondents indicated that their project leaders were motivating them towards this activity but 40% were more neutral in their opinion, with them neither disagreeing nor agreeing with this fact, an indication that the motivation from the team leaders needed to be intensified.

4.7 Knowledge Transfer Skills and Transfer of Research Knowledge into Practice

The study further sought to assess the existence of knowledge transfer skills among the researchers and the employees of ICIPE and how that affects the transfer of research knowledge. It is possible to have the research knowledge but then to be able to transfer it to the necessary recipients and in the right format might be a challenge. However, it is important to establish what impact having knowledge transfer skills has on the actual transfer of research knowledge. A 5-point likert scale ranging between 1(strongly agree) , 2 (agree), 3 (neutral), 4(disagree) to 5(strongly disagree) was used and the respondents were asked to give their opinion on the extent to which they felt they had the necessary skills to transfer research knowledge. The results are summarized in table 4.8.

Table 4.8: Knowledge Transfer Skills and Transfer of Research Knowledge into Practice

Statements of Participation	1	2	3	4	5	Mean	SD
Project teams receive regular trainings to improve their research knowledge transfer skills	2 (2.35%)	16 (18.82%)	49 (57.65%)	8 (9.41%)	10 (11.76%)	3.09	0.92
Project team members are highly interested in gaining these skills	14 (16.47%)	55 (64.71%)	16 (18.82%)	0	0	2.02	0.60
Skills gained through such trainings greatly improve the transfer of research knowledge to practice	14 (16.47%)	55 (64.71%)	16 (18.82%)	0	0	2.02	0.60
The skills attained in such trainings are applied by the team members	31 (39.24%)	16 (20.25%)	8 (10.13%)	24 (30.38%)	0	2.32	1.23
Composite Mean						2.36	

From the responses, 57.65% of the respondents were neutral on the fact that they receive regular trainings on research transfer skills, with a mean of 3.09. The other respondents were distributed almost equally on the agreeing half and the disagreeing one. This indicated how unpopular trainings to enhance research transfer skills were in the organization. On the flip side, it was evident that the respondents were interested in gaining necessary skills for transfer of research knowledge with a mean of 2.02 and 81.18% agreeing and strongly agreeing to this. Further, with a similar mean of 2.02 and 81.18% of the respondents agreeing and strongly agreeing, it was evident that skills that were previously gained on the transfer of research knowledge were of benefit to the researchers and therefore not only were the skills necessary, but they did add value. 59.49% of the respondents also agreed and strongly agreed to the fact that they did apply skills gained from the trainings while conducting research transfer activities. From the results, it was evident that the need for knowledge transfer skills was not only extremely necessary but was also beneficial to the teams and unfortunately, it was evident that this was not very common with majority being neutral with the fact that they gained regular trainings on this.

4.8 Community Involvement and Transfer of Research Knowledge into Practice

As a fourth objective, the study sought to establish what impact the involvement of the community in project activities had on the transfer of research knowledge. It was important to understand from the institution team whether the situation was better when communities were involved and at what stage of their being involved would work as well. A 5-point likert scale ranging between 1 (strongly agree), 2 (agree), 3 (neutral), 4 (disagree) to 5 (strongly disagree) was used and the respondents were asked to give their opinion on how community involvement influenced transfer of Research Knowledge into practice. The response from the Institution's end is reported in the table 4.9:

Table 4.9: Analysis of the Impact of Community Involvement on the Transfer of Research Knowledge into Practice

Statements of Participation	1	2	3	4	5	Mean	SD
The community is involved in the development of projects	14 (16.47 %)	49 (57.65 %)	10 (11.76 %)	4 (4.71%)	8 (9.41 %)	2.33	1.11

The community is involved in data collection activities	31 (36.47 %)	34 (40.00 %)	6 (7.06%)	14 (16.47 %)	0	2.04	1.0 5
Project activities awareness raising campaigns are often conducted for the community	6 (7.06%)	21 (24.71 %)	46 (54.12 %)	4 (4.71%)	8 (9.41 %)	2.85	0.9 7
The project team conducts meetings with the local communities to get feedback on the project on a regular basis	6 (7.06%)	21 (24.71 %)	46 (54.12 %)	4 (4.71%)	8 (9.41 %)	2.85	0.9 7
There are community members working, directly or indirectly, with the project teams on project activities	39 (45.88 %)	28 (32.94 %)	14 (16.47 %)	4 (4.71%)	0	1.88	0.8 8
Composite Mean						2.37	

From the results presented in the table 4.9 the respondents, here being the scientists, students and technicians were between neutral and in agreement with the fact that communities were involved in the development of projects with a mean of 2.33. Key to note though is that close to 10% of the respondents completely disagreed with the fact that communities were involved at the development stage of the projects. The respondents however did majorly agree with the fact that the communities were involved in the data collection activities with 76.47% of the respondents agreeing and strongly agreeing to this and with a mean of 2.04. This was further supported by the mean of 1.88 that strongly indicated that the community members were working with the project teams either directly or indirectly, with 78.82% positively responding to this. However, the mean inclined more towards neutral when it came to project activities awareness raising campaigns being conducted with a mean of 2.85 and a total of 54.12% of the respondents giving a neutral response. The same was observed when it came to the project teams holding regular meetings to receive feedback from the communities where they were conducting research work. The responses inclined more towards neutral with a mean of 2.85. This was a clear indication that interactions with the community to enlighten them on the various project activities as well as receive feedback from them was not a very common practice.

4.8.1 Community Involvement and Transfer of Research Knowledge into Practice; Communities' perspective

The study also sought to understand what the community's perspective was as far as their involvement in the research activities was concerned as well as on the issue of the transfer of research knowledge to them. A 5-point likert scale ranging between 1 (strongly agree), 2 (agree), 3 (neutral), 4 (disagree) to 5 (strongly disagree) was used and the respondents were asked to give their opinion on their involvement as a community in the transfer of research knowledge. The results are as presented in table 4.10.

Table 4.10: Community Involvement and Transfer of Research Knowledge into Practice; Communities' perspective

Statements of Participation	1	2	3	4	5	Mean	SD
Our community is involved in the development of projects	0	10 (47.62%)	8 (38.10%)	3 (14.29%)	0	2.67	0.73
Our community is involved in data collection activities	12 (57.14%)	4 (19.05%)	5 (23.81%)		0 0	1.67	0.86
Awareness raising campaigns on the project activities are often conducted for the community	6 (28.57%)	10 (47.62%)	3 (14.29%)	2 (9.52%)	0	2.05	0.92
The project team conducts meetings with the local communities to get feedback on the project on a regular basis	4 (19.05%)	10 (47.62%)	4 (19.05%)	3 (14.29%)	0	2.29	0.96
There are community members working, directly or indirectly, with the project teams on project activities	8 (38.10%)	8 (38.10%)	5 (23.81%)	0	0	1.86	0.79
Our opinion and feedback are taken into consideration	5 (23.81%)	11 (52.38%)	3 (14.29%)	1 (4.76%)	1 (4.76%)	2.14	1.01
We receive feedback and interventions on the research conducted in our area after the research work is completed	7 (33.33%)	9 (42.86%)	5 (23.81%)	0	0	1.19	0.77

There are follow-up activities in our region even after the end of the project	4 (19.05%)	7 (33.33%)	6 (28.57%)	3 (14.29%)	1 (4.76%)	2.52	1.12
The research work carried out benefits our community directly	10 (47.62%)	7 (33.33%)	3 (14.29%)	1 (4.76%)	0	1.76	0.89
Composite Mean						2.10	

From the results, the community's responses ranged between neutral and agreeing when it came to their involvement in the development of projects with a mean of 2.67 and close to 86% of the respondents being within these ranges. However, when it came to matters data collection, a strong percentage agreed to this with 57.14% strongly agreeing and 19.05% agreeing to this. The communities tended to incline more towards agreeing when it came to the participation in awareness raising campaigns as well as holding regular team meetings to receive feedback with means of 2.05 and 2.29 with 47.62% of the respondents in both instances agreeing to this. 76.20% of the respondents jointly agreed and strongly agreed that there were community members that were working directly or indirectly with the project teams on various project activities. 52.38% did agree with the fact that their feedback was considered with a mean of 2.14. It was however evident that close to 23% of the respondents were neutral, disagreed and strongly disagreed with this opinion. They did not believe their feedback and opinion was taken into consideration. With a high mean of 1.19 it was evident that majority of the recipients did receive feedback and interventions in research work conducted in their various areas. Close to 76% of the respondents agreed and strongly agreed with this opinion. With a mean of 2.52, it was a near neutral position when it came to follow-up activities being conducted in the research regions post the project period. It was evident though that the research work conducted benefitted the communities directly with a mean of 1.76 and a percentage of 47.62% strongly agreeing and 33.33% agreeing to this as well.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings, discussions, conclusions and recommendations based on the analysis in chapter four. The chapter also outlines the contribution to the body of knowledge and suggestions for further research. The conclusions and recommendations drawn were focused on addressing the purpose of this study which was to establish the factors influencing the transfer of research knowledge into practice in ICIPE.

5.2 Summary of Findings

Through the study, several things were established, and they are summarized below on an objective per objective basis.

5.2.1 Transfer of Research Knowledge into Practice

The study established that that research work conducted in the past two years was being shared with the relevant communities as most respondents agreed with this. All the 85 respondents ranged between agree and strongly agree with a means of 1.45 thus majority strongly agreeing. The study also showed that majority of the recipients of the transferred research knowledge were receptive of the information they were receiving from the research work conducted. 60% agreed with this and the remaining 40% were neutral in their response which was still not negative. The study further indicated that the recipients were benefitting directly from the results of the research work. A mean of 2.16 was observed for this with 60% of the respondents agreeing and strongly agreeing.

The study also found out that some changes were observed in the community following the sharing of the research results, an indication that shared research results was a great benefit to the community. A mean of 1.92 was recorded for this with 81% of the recipients agreeing or strongly agreeing with this fact. Finally, the study observed that the research results once shared, not only benefitted the community where the research work was conducted but the shared research results were of benefit to an even wider scale of people. The results were an indication

that it was beneficial to share the research results not only to the involved community but also with a wider scale of audience as they could also benefit. It was clear that the benefits of sharing outweighed anything else and the results were equally visible.

5.2.2 Organization Strategies and Transfer of Research Knowledge into Practice

The study revealed that there were organization strategies in place as pertains to the transfer of research knowledge, however it was either not very clear to every respondent or they were not too sure as majority ranged between neutral and agree with a mean of 2.4 though 50% still responded with agree and strongly agreed. Given the standard deviation, one could also tell that the opinions of the respondents were distributed across a longer range with a slightly high deviation from the mean. The study also established that majority of the respondents agreed with the fact that organization objectives were discussed in the organization, an indication that it was something considered as very important in the entire organization. Further, the study revealed that the respondents ranged between neutral and agree when it came to the issue of effectiveness of merging various project to support transfer of research knowledge with a mean of 2.24 and a percentage response of 83.53% to this. Small percentage of the respondents i.e. less than 5.00% did not agree with the fact that merging of projects was an effective strategy. Their opinion was important though formed the minority.

The study also revealed that where research knowledge was already being transferred, then such projects would most likely receive more funding support with a mean of 1.87 on this thus showing majority were in agreement of this. Finally, it was observed that projects already transferring research knowledge would more easily receive the organization management support to grow. 74.11% of the respondents responded to this by agreeing or strongly agreeing with the same. In essence, the composite mean came in as an indication that majority positively agreed with the fact that organization strategies in place and known across the organization were of benefit to the transfer of research knowledge and that the measures the organization was putting in place like merging of related projects was working. The composite mean for this was 1.98 an indication that organization strategies positively and strongly influenced the transfer of research knowledge. Having organization strategies in place that supported transfer of research knowledge positively influenced the same.

5.2.3 Management Commitment and Transfer of Research Knowledge into Practice

From the study, it was established that the project teams had regular team meetings, and this was evidenced by the mean of 1.91 with close to 90.59% of the respondents agreeing to this. There was however a small percentage that was in disagreement with this. The study further established that the teams would discuss the issue of transfer of research knowledge as an objective in their work during the meetings with a mean of 2.11 and close to 75% of the respondents agreeing to this. The study however revealed that the teams were not as strongly convinced when it came to the project leaders putting measures in place to ensure implementation of transfer of research knowledge with a mean of 2.47 and 30.59% of the respondents disagreeing with this fact. It further revealed that there was also a slightly high percentage, 30.59%, that disagreed with the fact that sufficient time was allocated for the transfer of research work. As much as the activity was considered important, a significant percentage was still not allocating sufficient time to the activity.

The study further showed an equally spread out opinion when it came to the distribution of resources for the transfer of research knowledge. Most of the respondents agreed and strongly agreed that adequate funding was being allocated for the activity. However, there was still the minority that had a neutral and disagreeing opinion to this. Finally, the study established that 60% of the respondents thought that their project leaders were motivating them towards this activity but 40% were more neutral in their opinion, with them neither disagreeing nor agreeing with this fact, an indication that the motivation from the team leaders needed to be intensified. With a composite mean of 2.2, the study established that this factor was also key to the transfer of research knowledge to practice and thus strongly influenced this. This was an indication that an improvement would greatly influence the transfer of research knowledge.

5.2.4 Knowledge Transfer Skills and Transfer of Research Knowledge into Practice

The study revealed that 57.65% of the respondents were neutral on the fact that they receive regular trainings on research transfer skills, with a mean of 3.09. The other respondents were distributed almost equally on the agreeing half and the disagreeing one. This indicated how unpopular trainings to enhance research transfer skills were in the organization. The study

however showed that the respondents were interested in gaining necessary skills for transfer of research knowledge with a mean of 2.02 and 81.18% agreeing and strongly agreeing to this. Further, with a similar mean of 2.02 and 81.18% of the respondents agreeing and strongly agreeing, the study revealed that skills that were previously gained on the transfer of research knowledge were of benefit to the researchers and therefore not only were the skills necessary, but they did add value.

The study also established that 59.49% of the respondents agreed and strongly agreed to the fact that they did apply skills gained from the trainings while conducting research transfer activities. The study evidenced the need for knowledge transfer skills and showed that the skills were not only extremely necessary but were also beneficial to the teams and unfortunately, it was evident that this was not very common with majority being neutral with the fact that they gained regular trainings on this. The composite mean for this was 2.36 an indication of a positive relationship between increase in the transfer of research knowledge and the increase of the knowledge transfer skills. However, the relationship is not considered extremely strong.

5.2.5 Community Involvement and Transfer of Research Knowledge into Practice

From the scientists, students and technicians' point of view, the study established that the respondents were between neutral and in agreement with the fact that communities were involved in the development of projects with a mean of 2.33. Key to note though is that close to 10% of the respondents completely disagreed with the fact that communities were involved at the development stage of the projects. The study also showed that the respondents majorly agree with the fact that the communities were involved in the data collection activities with 76.47% of the respondents agreeing and strongly agreeing to this and with a mean of 2.04. The study finding was further supported by the mean of 1.88 that strongly indicated that the community members were working with the project teams either directly or indirectly, with 78.82% positively responding to this.

The study indicated that the mean inclined more towards neutral when it came to project activities awareness raising campaigns being conducted with a mean of 2.85 and a total of 54.12% of the respondents giving a neutral response. The study observed the same when it came to the project teams holding regular meetings to receive feedback from the communities where

they were conducting research work. The responses inclined more towards neutral with a mean of 2.85. This was a clear indication that interactions with the community to enlighten them on the various project activities as well as receive feedback from them was not a very common practice.

From the community's responses the study showed that communities inclined more towards neutral and agreeing when it came to their involvement in the development of projects with a mean of 2.67 and close to 86% of the respondents being within these ranges. However, when it came to matters data collection, the study revealed a strong percentage agreed to this with 57.14% strongly agreeing and 19.05% agreeing to this. The study also showed that when it came to the participation in awareness raising campaigns as well as holding regular team meetings to receive feedback, means of 2.05 and 2.29 were recorded with 47.62% of the respondents in both instances agreeing to this. The study further established that 76.20% of the respondents jointly agreed and strongly agreed there were community members that were working directly or indirectly with the project teams on various project activities. The study also revealed that 52.38% agreed with the fact that their feedback was considered with a mean of 2.14. It was however evident that close to 23% of the respondents were neutral, disagreed and strongly disagreed with this opinion. They did not believe their feedback and opinion was taken into consideration.

The study indicated a high mean of 1.19 evidencing that majority of the recipients did receive feedback and interventions in research work conducted in their various areas. Close to 76% of the respondents agreed and strongly agreed with this opinion. With a mean of 2.52, it was a near neutral position when it came to follow-up activities being conducted in the research regions post the project period. The study further revealed that though the research work conducted benefitted the communities directly with a mean of 1.76 and a percentage of 47.62% strongly agreeing and 33.33% agreeing to this as well.

5.3 Discussions of the Findings

Research is carried out for the purpose of providing solutions to already existing problems and it is expected to contribute to innovation of new ways of handling issues and going about the challenges. This is in turn meant to positively influence economic growth and ensure

sustainability of newly introduced interventions. Knowledge transfer involves both the sharing of knowledge by the knowledge source and the acquisition and application of knowledge by the recipient (Wang and Noe, 2010, p. 117). This has been evidenced in the study with 41.18% of the respondents strongly agreeing and 23.53% of the respondents agreeing that the recipients of the research information transferred to them following various research activities, have been receptive of the knowledge transferred to them. The respondents further positively confirmed that those receiving the research knowledge were directly benefitting from the research work conducted with 60% of the respondents ranging between agreeing and strongly agreeing. Further, the research knowledge transferred was not only affecting them but an even wider scale of people with 83.53% of the respondents combinedly agreeing and strongly agreeing to this. This is an indication that if the transfer of research knowledge would be intensified then a lot of communities could be benefitting from the numerous research work already conducted. It was also notable that because they were not only receiving the research knowledge information but that there was also implementation of the same and thus the notable change in how communities functioned. This fully satisfied the definition of knowledge transfer and evidenced its effectiveness.

Organizations must first understand the businesses they serve and their strategic objectives, then mold capabilities accordingly. (Kessler and Kates, 2010). Until the right organization objectives and goals are in place then it becomes difficult to move with a given activity. It is not just important to have the objectives in place, but to also have them well understood by the organization community. From the study, it was evident that objectives on transfer of research knowledge were in place with 21.18% of the respondents strongly agreeing to this and 29.41% agreeing to this, however the understanding of what the objectives were and how to go about them did not seem well understood by the organization community. This means that capabilities around these were not being properly molded by the organization community.

A major role of management is to provide leadership to the teams via hands on leadership which helps build the trust of the team members and they thus tend to exhibit a greater degree of creative behavior when they trust their leaders. (Neeraj and Rajib, 2017) It is this type of hands on management and leadership skills that is required for effective communication of the transfer

of research knowledge objective and the motivation of the teams towards this. This can easily be enabled by having regular informal and formal team meetings that can be used as platforms to share the objectives. If the project leader manages remotely, then it becomes difficult to share their ideas, as well as receive feedback from the team members on what works best for given situations. It is also extremely important that the project leader be the one directly involved in allocating time and resources to activities like the transfer of research knowledge. From the study, it was evident that the teams endeavored to have regular team meetings with 23.53% of the respondents strongly agreeing that they conducted team meetings and 67.06% also agreeing to this. However, there was a slight challenge when it came to follow up on the activities and allocating the time and financial resources with the elements having means of 2.47 and high standard deviations, an indication of spread out opinions on the same. 30.59% of the respondents disagreed with the fact that project managers put up follow up measures to ensure transfer of research knowledge took place as well as to allocate the sufficient time for this. As a result, the transfer of research knowledge did not reach maximum potential.

Researchers tend to be very good at what they do and tend to stick only to what they enjoy doing. However, it is important to note that they need a predisposition to behave in a purposeful manner to achieve specific, unmet needs and that they also need the will to achieve, and an inner force that drives them to accomplish personal organizational goals (Society of HRM, 2009). To accomplish this, the place of training in other areas other than the research areas is extremely necessary to ascertain that the goals in these areas are achieved. It was evident from the study that project teams rarely received training on knowledge transfer skills. It is therefore easier for the teams to participate in their areas of expertise and neglect the very important area of knowledge transfer skills. It was clear from the study that the project teams did benefit greatly from previously conducted trainings to improve their knowledge transfer skills with 64.71% agreeing to this and 16.47% strongly agreeing to this, making responding positively to the fact that the skills gained greatly improved their practice and that they actually did apply them in their activities. It is therefore a call to the organization to provide more of this as the need of this was clear from the study.

Community involvement from the very beginning of a project ensures the building up of relationship between the researchers and the communities (Oduwaiye, 2009). Following the research study, it was evident that the researchers did involve the communities in their activities though certain gaps were evident. A lot of the community involvement seemed to be during the data collection process with 57.14% of the community respondents strongly agreeing that they were being involved. Only 28.57% strongly agreed to being engaged in awareness raising campaigns of the project and 19.05% strongly agreed to them having regular meetings with the research teams to receive feedback thus leaving out the communities during the crucial stages of the project development. Involvement of the communities from the very beginning would ensure the creation of better working relations. It is also important that the project teams endeavor to keep the relationships with the communities going on post the collection of the data. It was noted in the study that where the communities were involved after data collection with engagements through awareness raising campaigns, follow-up activities in the region then the research work conducted could be observed to benefit the community. This is also an indication that they could hold onto the new practices introduced following research activities and thus benefitting fully from this. Involvement throughout the entire process shows and brings about a sense of ownership and acceptance of the project.

5.4 Conclusion of the Study

Based on objective one of this study the study concluded that organization strategies influence the transfer of research knowledge into practice. This is to mean that the existence of policies and the existence of an environment where transfer of research knowledge could be discussed as an objective of research creates an enabling environment for the transfer of the research knowledge to practice to take place. It can also be concluded that projects that are able to transfer research knowledge to practice tend to receive more support and thus the growth of more projects. This goes to support the fact that donors are also interested in transfer of research knowledge and not just on having research results.

Based on the second objective of the study, the study concluded that the commitment of project management was key for the transfer of research knowledge to practice. The study showed that while it was important to talk about transfer of research knowledge and set it as an objective, it

was key to set aside time and financial resources for this as well as provide follow -up measures to ensure the transfers were being conducted. The management ought to also provide necessary motivation to the team towards this transfer.

With reference to the third objective, the study concluded that knowledge transfer skills on the transfer of research knowledge to practice, were necessary for transfer to take place. That means that providing trainings on enhancing the skills to transfer knowledge was necessary as such skills were deemed necessary by the teams and they agreed to having used previously acquired skills in their work activities.

For the fourth objective, the study concluded that community involvement was key for the transfer of research knowledge. Their involvement helped create a sense of ownership and thus the interest to keep the research interventions running even past the project.

5.5 Recommendations of the Study

Based on the findings, discussions and the conclusions, the study recommends the creation of awareness of the existing knowledge transfer objectives in the organization, to make the research teams more enlightened on this as well as create an interest in them to push for the transfers further. The study also recommends the merging of related projects conducted in various research areas to come together at the point of transferring research knowledge as this will allow the knowledge from the related projects be shared with a wider audience and help cover gaps in individual research projects thus having more impact on the society.

The study also recommends that project management should provide more time and financial resources to support the transfer of research knowledge to practice. While it is good enough to discuss it and plan for it, it is even better to have this executed. Further, the project management should put measures in place to ensure that transfer of research knowledge into practice is followed up and executed thus moving it from just a point of discussion to an actual action.

The study further recommends that the research teams be equipped with the knowledge transfer skills necessary for knowledge transfer to practice. A lot of the teams are aware they need to

transfer the research knowledge, but they lack the know-how yet when they are provided with the necessary training, they are able to apply the same in their work and thus conduct the transfers of the research knowledge to practice.

The study does also recommend the involvement of the community in the research activities and not just at the point of implementation but in the preliminary stages as well. This will help the research teams understand the community needs better and thus the communities will be more receptive at the point of transfer of knowledge. The study also recommends the creation of better awareness of the research project throughout the project cycle to avoid only having the community involved in the final stages. It will also help the researcher understand the community needs better thus making the research more relevant.

Finally, the study recommends the intensification of follow – up activities post the end of a project. This will help ensure continuity of the knowledge transferred to practice after research work is finalized. This could also lead to the birthing of new projects to continue with the work already started or to further fill any existing gaps in the knowledge gained and transferred.

Table 5.1 Contribution to body of knowledge

Objective	Contribution to the Body of Knowledge
How organization strategies influence the transfer of research knowledge into practice	<ul style="list-style-type: none"> • Awareness creation of existing and upcoming organization strategies on transfer of research knowledge to practice. • Encourage the merging of related project to enhance the quality and quantity of research knowledge transferred to practice.
How management commitment influences the transfer of research knowledge into practice	<ul style="list-style-type: none"> • More time and financial resources ought to be allocated to the transfer of research knowledge into practice. • Project managers to motivate teams towards transfer of research knowledge into practice. • Project managers ought to put follow – up measures in place to ensure that the discussions on transfer of research knowledge to practice are actualized.
How the knowledge - transfer skills among the researchers in the organization influence the transfer of research knowledge into practice	<ul style="list-style-type: none"> • Knowledge transfer skills should be enhanced as they are necessary for the transfer of research knowledge into practice.
How community involvement influences the transfer of research knowledge into practice	<ul style="list-style-type: none"> • Community involvement is key in the transfer of research knowledge into practice. • Communities should be involved from the project development stage of the project. • Follow -up interventions should be put in place after the transfer of research knowledge into practice.

5.6 Suggestions for further research

Following the study, the below are suggestions of areas that need further research:

- 1) Factors influencing transfer of research knowledge into practice, a case study a different research institution.
- 2) The impact of community involvement in the transfer of research knowledge into practice.
- 3) The ways of improving management commitment for transfer of research knowledge into practice.

REFERENCES

- Adeyoyin, S.O., Agbeze-Unazi, F., Oyewunmi, O.O., Adegun, A.I., and Ayodele, R.O. (2015) *Effects of Job Specialization and Departmentalization on Job Satisfaction among the Staff of a Nigerian University Library*. Library Philosophy and Practice (e-journal). Paper 1295
- Anastas, W. (1999) *Research Design for Social Work and the Human Services 2nd ed.* Columbia University Press, New York
- Auckland, S, (2010), BRC Guidance: *Involving Users in Research Process*.Version1. April 2010
- Berner, M., Hatch, M.A. and Youens, E. (2010). *Two Models for Nonprofit Funding Allocation: Lessons for Nonprofit Managers*. NON Profit Management VOL. 14
- Beyerlein, S.W., Holmes C., and Apple D. K. (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance (4th ed.) (19-22)*.
- Burns, N. & Grove, S. (2005). *The practice of nursing research, critique and utilization*. Philadelphia: St.Louis, Elsevier.
- Court, J & Young, J. (2006). *Bridging research and policy in international development: an analytical and practical framework*. Development in practice, number 1, February 2006
- Crawford, P., and Bryce, P. (2003) *Project Monitoring and Evaluation: a Method for Enhancing the Efficiency and Effectiveness of Aid Project implementation*. International Journal of Project Management OI: 10.1016/S0263-7863(02)00060-1
- Donaldson, T. & Preston, L. (1995). *The stakeholder theory of the modern corporation: Concepts, evidence and implications*. Academy of Management Review 20, 65-91
- DeFillippi, R. J., Arthur, M. B. & Lindsay, V. J. (2006). *Knowledge at Work*. Oxford: Blackwell Publishing.

Devereaux PJ, Choi PTL, Lacchetti C, et al. (2002) .*A Systematic Review and Meta-Analysis of Studies Comparing Mortality Rates of Private For-Profit and Private Not-for-Profit Hospitals*. Canadian Medical Association Journal. 2002;166(11):1399–406.

Edwards,J., Ketchen, D., Short,J. Try, D., (2012). *Mastering Strategic management – 1st Canadian Edition*.

Elger, D. (2007). *Theory of Performance*. Pacific Crest. Faculty Development Series

Ferguson, J. (2005). *Bridging the gap between research and practice*. Volume 1(3), 46-54
www.km4dev.org/journal

GERA, "GERA Program [2012]" (2012).Georgia Educational Research Association Conference2. <http://digitalcommons.georgiasouthern.edu/gera/2008-2013/2008-2013/2>

Green, A. (2017) *An Introduction to Health Planning for Developing Health Systems*. Oxford University Press

Greer, T.W, (2013, February 14) “*Closing the gap between research and Practice*”, retrieved from <https://www.td.org/Publications/Blogs/Higher-Education-Blog/2013/02>

Grimshaw, J., Thomas, R., MacLennan, G., Fraser, C., Ramsay, CR., Vale, L., Whitty, P., Eccles, MP., Maltowe, L., Shirran, L., Wensing, M., Dijikstra, R., & Donaldson, C. (2004). *Effectiveness and efficiency of guideline dissemination and implementation strategies*. Health Technology Assessment, vol. 8, no. 6.

Innvaer S., Vist G., Tremmaid M., Oxman A. Health Policy-Makers' Perceptions of Their Use of Evidence: A Systematic Review. *Journal of Health Services Research and Policy*. 2002;7(4):239–44. [[PubMed](#)]

Harmsworth, S. & Turpin, S. (2000). *Creating an Effective Dissemination Strategy*. TQEF National Co-ordination Team

Hemsley-Brown, J. (2004). *Facilitating research utilisation: A cross-sector review of research evidence*. *International Journal of Public Sector Management*, Vol. 17 Issue: 6, pp.534-552, doi: 10.1108/09513550410554805

Henriques G. (2011, December 13) “*Introduction to Theory of Knowledge*”, retrieved from <https://www.psychologytoday.com/blog/theory-knowledge/201112/introduction-theory-knowledge>

Higgins, J.P.T and Green, S. (editors). *Cochrane Handbook for Systematic Reviews of Interventions* Version 5.1.0 [updated March 2011]. The Cochrane Collaboration, 2011. Available from <http://handbook.cochrane.org>

Holtzman, Y. (2011). *Diversify your teams and collaborate: Because Great Minds Don't Think Alike*

Huberman, M. (1990). *Linkages between researchers and practitioners*. New York: American educational research Journal.

Jankowicz, A.D. (2000). *Business Research Methods*, Thomson Learning, p.197

Johansson, C, Miller V.D. and Hamrin, S (2014) "*Conceptualizing communicative leadership: A framework for analysing and developing leaders' communication competence*", Corporate Communications: An International Journal, Vol. 19 Issue: 2, pp.147-165, doi: 10.1108/CCIJ-02-2013-0007

Kesler, G., Kates, A. (2010). *Leading Organization Design: How to Make Organization Design Decisions to Drive the Results You Want*. Wiley, 2010.

Lavis, J.N. Robertson, D., Woodside, J.M., McLeod, C.B., Abelson J., (2003). *How Can Research Organizations More Effectively Transfer Research Knowledge to Decision Makers?* Millbank Quarterly. DOI: 10.1111/1468-0009.t01-1-00052

Latham, G.P. (2004). *The Motivational Benefits of Goal-Setting*. The Academy of Management Executive (1993-2005), Vol. 18, No. 4, Decision-Making and Firm Success (Nov., 2004), pp. 126-129

Lesser, L.I., Ebbeling, C.B., Goozner, M., Wypij, D., & Ludwig, D.S. (2007). *Relationship between funding source and conclusion among nutrition-related scientific articles*. Public Library of Science Medicine 4:41-46.

Meléndez, A.P & Moreno, A.G. (2012). *Open innovation in universities: What motivates researchers to engage in knowledge transfer exchanges?* International Journal of Entrepreneurial Behavior & Research, Vol. 18 Issue: 4, pp.417-439, DOI: 10.1108/13552551211239474

Mugenda, O.M & Mugenda A.G (1999) *Research Methods: Quantitative and Qualitative approaches*. ACTS press, Nairobi, Kenya

Mugenda, M. (2003), *Research Methods, Qualitative and Quantitative approaches*, African Centre for Technology Studies, Nairobi, Kenya.

Neeraj, J and Rajib, D, (2017) "*The influence of servant leadership, trust in leader and thriving on employee creativity*", *Leadership & Organization Development Journal*, Vol. 38 Issue: 1, pp.2-21, doi: 10.1108/LODJ-02-2015-0017

Norman, D., (2010). *Challenges to design Research: Technology First Needs Last*. Pg.38

O'Daniel, M. and Rosenstein, A.H. (2008). *Patient Safety and Quality: An Evidence-Based Handbook for Nurse* Chapter 33 Professional Communication and Team Collaboration.
<https://www.ncbi.nlm.nih.gov/books/NBK2637>

Oduwaiye, R., Owolabi, H & Onasanya, S. (2009). *Research dissemination, utilization and commercialization by academic staff of a Nigerian University*. University of Ilorin: Nigeria.

Orodho, A.J (2003). *Essential of educational and social sciences researchers methods*. Nairobi : Masda publishers.

Ozga, J. (2004). *From Research to Policy and Practice: Some Issues in Knowledge Transfer*.

Project Management Institute, (2015). *Pulse of the Profession: Capturing the value of Project Management*. February 2015

- Rosenbloom, J., Ginther, D.K., Juhl Ted., Heppert, J.A. (2015). *The Effects of Research & Development Funding on Scientific Productivity: Academic Chemistry, 1990-2009. The Effects of Research & Development Funding on Scientific Productivity: Academic Chemistry, 1990-2009*. PLOS One
- Ryan, R.M. and Deci, E.L. (2000). *Intrinsic and Extrinsic Motivations: Classic Definitions and New*
- Simboli, C. (2016). *Importance in Advancement of Society*.
<http://www.itworks-inc.com/2016/04/06/the-importance-of-research-in-the-advancement-of-society/>
- Smith, L.J. and Drago, K. (2009). *Learner Support in Workplace Training* http://www.c3l.uni-oldenburg.de/cde/support/fa04/Vol.9_chapters/SmithDrago.pdf
- Snape,D.J, and Snape,J.B (2006) *Motivation of scientists in a government research institute: Scientists' perceptions and the role of management*, Management Decision, Vol. 44 Issue: 10, pp.1325-1343, doi: 10.1108/00251740610715678
- Society for Human Resource Management (2009): *2009 Employee Job Satisfaction: Understanding the Factors That Make Work Gratifying*. 6-17. Web. 14 Feb. 2012.
- Susanty, A, Hanayanni, N.U and Henrawan M.Y. (2012) *Key Success Factors that Influence Knowledge Transfer Effectiveness: A Case Study of Garment Sentra at Kabupaten Sragen*. SviVerse ScienceDirect Procedia Economics and Finance vol.4
- Wang, S., & Noe, R. A. (2010). *Knowledge sharing: A review and directions for future research*. Human Resource Management Review, 20 (2), 115 -131.
- West D. (2012) *Improving University Technology Transfer and Commercialization* .The Center for Technology Innovation. Retrieved from:
<https://www.brookings.edu/wpcontent/uploads/2016/06/DarrellUniversity-Tech-Transfer.pdf>

Williams Group.(2013). Marketing your knowledge: *A report to philanthropy's R&D organizations*. Retrieved from http://www.iapps.com/usr_doc/WilliamsGroupReport.pdf

World Bank, (2010). From research to practice. New York. Free press

Zarinpoush, F., Gotlib Conn, L. (2006). *Knowledge Transfer*. Tip Sheet. Imagine Canada.

<http://www.businessdictionary.com/definition/concentration-strategy.html>

<http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780198571346.001.0001/acprof-9780198571346-chapter-11> - Resource allocation

APPENDIX 1

RESEARCH QUESTIONNAIRE FOR ICIPE EMPLOYEES

SECTION A : General Information

I am conducting an academic research study on the Factors Influencing the Effective Transfer of Research Knowledge into Practice using as a case study some selected projects at ICIPE. Below is a questionnaire to facilitate my study and I kindly request your assistance in filling this. Your participation in this is completely voluntarily. Please read carefully and give appropriate answers by marking or filling the blank spaces.

Note: The information obtained in this questionnaire will be treated with utmost confidentiality.

1. Sex: Male Female
2. Age: 18-25 years 26-35 years
 36-45 years 46 years and above
3. Education level: Primary Secondary
 College University and above

4. Category of the Respondents:

- Senior Scientist PHD and MSc. Scholars
- Research Technicians Community Members

5. For how long have you worked for ICIPE?

Less than 3 years 3-5years
 6 years and above

SECTION B: Transfer of Research Knowledge into Practice

1) Does your project take part in research knowledge transfer activities (dissemination/sharing activities)?

Yes No

2) Who are the major beneficiaries of your project's / team's research work?

Fellow Researchers Policy Makers

Extension Officers Local Communities / Farmers

3) Kindly select either 1,2,3,4 or 5 in the table below to respond to the next questions where 1 – strongly agree, 2 – somewhat agree, 3 – neutral/no opinion, 4 – somewhat disagree and 5 – strongly disagree

SN	Statements	1	2	3	4	5
1.	Research work conducted in the last two years has been shared with the relevant communities, policy makers and agricultural or extension officers.					
2.	The recipients are receptive of the information received from the research work conducted.					
3.	The recipients confirmed that they are benefitting directly from the results of research work shared.					
4.	The researcher observes some changes in the communities based on the research conducted and the results shared.					
5.	Research information benefits a wider scale of people than just the community where the work was carried out.					

SECTION C: Organization Strategies and Transfer of Research Knowledge to Practice

1) Do organization policies contribute to the effective transfer of research knowledge to practice?

Yes No

2) Do you know of any organization policies in your organization that have been put in place to facilitate the transfer of research knowledge to practice?

Yes No

If yes, which one?

.....

3) Kindly select either 1,2,3,4 or 5 in the table below to respond to the next questions where 1 – strongly agree, 2 – somewhat agree, 3 – neutral/no opinion, 4 – somewhat disagree and 5 – strongly disagree

SN	Statements	1	2	3	4	5
1.	There are clear organization objectives as far as the transfer of research knowledge is concerned					
2.	The objectives on transfer of research knowledge to practice are discussed in the organization					
3.	There is integration (merging) of various projects to support transfer of research knowledge					
4.	The integration (merging) of various projects to support transfer of research knowledge is effective					
5.	Projects that are already transferring research knowledge tend to receive more support as far as funding is concerned					
6.	Projects already transferring research knowledge receive better organization management support to grow					

SECTION D: Management Commitment and Transfer of Research Knowledge to Practice

1) In your opinion are the project managers committed to the transfer of research knowledge to practice?

Yes No

2) How often is reporting done to the donors?

Monthly Bi-monthly Quarterly Bi-annually Annually

3) Do the donors require you to report on transfer of research knowledge activities undertaken during the project life?

Yes No I am not aware

4) Kindly select either 1,2,3,4 or 5 in the table below to respond to the next questions where 1 – strongly agree, 2 – somewhat agree, 3 – neutral/no opinion, 4 – somewhat disagree and 5 – strongly disagree

SN	Statements	1	2	3	4	5
1.	Project team meetings are held on a regular basis					
2.	Project teams discuss transfer of research knowledge as an objective for their work					
3.	There are follow up measures put in place by the project leader to ensure the transfer of research knowledge objective is implemented					
4.	Sufficient time is allocated to research knowledge transfer activities					
5.	Sufficient financial resources are allocated in the team to support transfer of research knowledge					
6.	The project leader motivates the team to take part in the transfer of research knowledge					

SECTION E: Knowledge Transfer Skills among the Researchers and Transfer of Research

Knowledge to Practice

1) In your opinion, do you have the necessary skills to transfer research knowledge to practice?

Yes No

2) How often do you receive the necessary training needed for you to acquire the skills?

Very Often Regularly Sometimes Never

3) In your project, do you have a diversified team that enables some focus on the transfer of research knowledge?

Yes No

4) Kindly select either 1,2,3,4 or 5 in the table below to respond to the next questions where 1 – strongly agree, 2 – somewhat agree, 3 – neutral/no opinion, 4 – somewhat disagree and 5 – strongly disagree

SN	Statements	1	2	3	4	5
1.	Project teams receive regular trainings to improve their research knowledge transfer skills					
2.	Project team members are highly interested in gaining these skills					
3.	Skills gained through such trainings greatly improve the transfer of research knowledge to practice					
4.	The skills attained in such trainings are applied by the team members					

SECTION F: Community Involvement and Transfer of Research Knowledge to Practice

1) Are the communities involved in the research work carried out by your project?

Yes No

2) Are the communities receptive of your research work?

Yes

No

- 3) Kindly select either 1,2,3,4 or 5 in the table below to respond to the next questions where
1 – strongly agree, 2 – somewhat agree, 3 – neutral/no opinion, 4 – somewhat disagree
and 5 – strongly disagree

SN	Statements	1	2	3	4	5
1.	The community is involved in the development of projects					
2.	The community is involved in data collection activities					
3.	Project activities awareness raising campaigns are often conducted for the community					
4.	The project team conducts meetings with the local communities to get feedback on the project on a regular basis					
5.	There are community members working, directly or indirectly, with the project teams on project activities					

Thank you for your Participation

RESEARCH QUESTIONNAIRE FOR THE COMMUNITY MEMBERS

SECTION A : General Information

I am conducting an academic research study on the Factors Influencing the Effective Transfer of Research Knowledge into Practice using as a case study some selected projects at ICIPE. Below is a questionnaire to facilitate my study and I kindly request your assistance in filling this. Your participation in this is completely voluntarily. Please read carefully and give appropriate answers by marking or filling the blank spaces.

Note: The information obtained in this questionnaire will be treated with utmost confidentiality.

This questionnaire is to be filled in by the community members only. It covers only one of the objectives of the study

1. Sex: Male Female

2. Age: 18-25 years 26-35 years
36-45 years 46 years and above

3. Highest Education Level: Primary Secondary
College University and above

4. Category of the Respondents:

Agriculture Officer Community Leader

Farmer

SECTION B

1) Are you aware of any ICIPE project(s) being conducted in your area?

Yes No

2) Do you know the nature of the project activities being carried out by the project (s)?

Yes No

If yes, what is the nature?

.....
.....

3) Have you been involved in the activities of this project?

Yes No

If yes, how? (E.g. meetings, training, beneficiaries)

.....

Kindly select either 1,2,3,4 or 5 in the table below to respond to the next questions where 1 – strongly agree, 2 – somewhat agree, 3 – neutral/no opinion, 4 – somewhat disagree and 5 – strongly disagree

SN	Statements	1	2	3	4	5
1	Our community is involved in the development of projects					
2	Our community is involved in data collection activities					
3	Awareness raising campaigns on the project activities are often					

	conducted for the community					
4	The project team conducts meetings with the local communities to get feedback on the project on a regular basis					
5	There are community members working, directly or indirectly, with the project teams on project activities					
6	Our opinion and feedback are taken into consideration					
7	We receive feedback and interventions on the research conducted in our area after the research work is completed					
8	There are follow-up activities in our region even after the end of the project					
9	The research work carried out benefits our community directly					

Thank you for your Participation

APPENDIX II

Krejcie and Morgan Table

TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size
"S" is sample size }

Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities",
Educational and Psychological Measurement, 1970.