

# Influence of Enterprise Resource Planning System on Performance of Universities: A Case Study of Selected Universities within Meru and Tharaka Nithi Counties

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## DECLARATION

This Research Thesis is my original work and has not been presented for an award of degree in any institution or university

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## **DEDICATION**

I dedicate this research thesis to my wife Jacqueline, my son Leo and the entire Mwongera family.

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I am grateful to all those who have contributed to this achievement knowingly and unknowingly. I am indebted to my supervisors Dr. Vivian Cheronon and Mr. Fredrick Mutea for their unrelenting support in laying a good foundation for the development of this research thesis. I also wish to extend my sincere gratitude to my family at large, my friends, my classmates, my colleagues at workplace and my mentor for the financial, moral and material support they gave me during my undertaking of this study. Finally, I acknowledge the Almighty God for giving me wisdom and knowledge to write this research thesis.

## **ABBREVIATIONS AND ACRONYMS**

<b>ALGOL</b>	ALGOritmic Language
<b>APS</b>	Advanced Planning and Scheduling
<b>BPR</b>	Business Process Re-engineering
<b>COBOL</b>	Common Business Oriented Language
<b>CRM</b>	Customer Relationship Management
<b>ERP</b>	Enterprise Resource Planning
<b>EU</b>	European Union
<b>ICT</b>	Information Communication and Technology
<b>IT</b>	Information Technology
<b>IS</b>	Information Systems
<b>MIS</b>	Management Information Systems
<b>MRP</b>	Material Resource Planning
<b>SAP</b>	Systems, Applications and Products.
<b>SCM</b>	Supply Chain Management
<b>UK</b>	United Kingdom
<b>US</b>	United States

## ABSTRACT

Management of information in universities is a powerful driver towards successful execution of their mandate, as it determines organizational growth and sustainability. In addition, the present promising business is winding up progressively and with useful units. Universities in Kenya are among the organizations implementing ERP systems. However, there exist various factors influencing this important process, which need to be fully understood and tackled. The importance of the research was to investigate the issues influencing the application of enterprise resource planning system in universities within Meru County and Tharaka Nithi County. The examination was controlled by four goals which include: deciding the impact of top administration support on the usage of ERP framework; building up the impact of end client preparing on the execution of ERP framework; discovering the impact of powerful authoritative correspondence on the usage of ERP framework; and deciding the impact of utilization of ERP specialists on the execution of ERP framework in universities within Meru County and Tharaka Nithi County. The target population comprises of a total of approximately 30 ICT personnel and 45 heads of department using the ERP systems in the public universities. The study adopted the descriptive research design. A sample size of 24 ICT personnel and 31 heads of department selected using purposive sampling technique were used for the study. The assessment was guided by four objectives which include: choosing the effect of top organization support on the use of ERP structure; developing the effect of end customer getting ready on the execution of ERP system; finding the effect of ground-breaking definitive correspondence on the use of ERP system; and choosing the effect of use of ERP pros on the execution of ERP system. The examination was completed in universities inside Meru County and Tharaka Nithi County among ICT staff and heads of utilitarian offices in the Universities. This examination was centred on the hierarchical components impacting usage of ERP frameworks by universities inside Meru County and TharakaNithi County.

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## DEFINITION OF OPERATIONAL TERMS

**Business Process Re-engineering (BPR)** – It is the reevaluating of business strategies to improve the speed, quality and yield of materials or organizations. It as needs be turns around usage of IT to reexamine an association's methods to achieve various goals got ready for reshaping the customer focus.

**Effective Communication:** This refers to a communication between two or more persons involved in the ERP wherein the intended message is successfully delivered, received and understood.

**ERP Consultants:** This refers to experienced professional who provides expert knowledge, and thus in this case are trained in enterprise resource planning (ERP).

**ERP Implementation:** a phase on ERP System life cycle which introduces, plan, design, test and get ready programming to utilize.

**ERP System:** An ERP framework is a coordinated data framework which causes association to make incorporate among capacities and employments to accomplish authoritative objectives.

**End User Training:** This refers to the action of teaching End users a particular skill requisite in the implementation and utilization of ERP services.

## CHAPTER ONE

### INTRODUCTION

#### *1.1 Background of the Study*

Today, Enterprise Resource Planning (ERP) Systems is implemented and used extensively in large and mid-sized institutions worldwide. The fast increment in execution of ERP frameworks in the board and organization of foundations of higher learning can't be overlooked (Gupta, 2008). More clients trying to interface application frameworks to departmental procedures, universities in Kenya are looking for approaches to coordinate their tasks in an offer to cut on operational costs, offer auspicious reaction to their customers and associate with their partners "continuously". To meet these necessities, universities in Kenya have depended on utilization of ERP frameworks to robotize their activities on an institutionalized stage in accordance with their key plans. Quite, because of financial development, creating nations, for example, Kenyans are getting to be real focused ERP merchants (Ndung'u and Kyalo, 2012). Nonetheless, it is significant that ERP execution is a long and complex procedure, and there have been numerous instances of ineffective usage.

ERP empowers associations to facilitate numerous division data. It has progressed from a person's resource the official's application to a tool that navigates IT. Sure enough customers, associate degree ERP may be able to "do everything" with the system that performs everything from section of offers orders, file the board to client organization. It tries to fuse the suppliers and customers with the operating state of the affiliation. For example, a sale entered within the acquisition or solicitation module passes the solicitation to aggregation application, which consequently sends materials sales to the shop prepare module, which gets the indispensable elements from suppliers and usages a collaborations module to induce them to the plant. All this, whereas the acquisition trade shows up all things thought of – a record module as pay. The customary application systems, that relationship usually uses, treat every trade autonomously. They're worked round the sturdy furthest reaches of unequivocal limits that a particular application is planned to cook for. ERP stops treating these trades freely as autonomous activities and trusts them to be a small amount of interlinked structures that structure the business (Gupta, 2015).

Numerous associations today have introduced or are executing bundled ERP frameworks to help their business exercises. Besides the market share for ERP merchants keeps on developing showing that more organizations are grasping ERP. The best three ERP sellers on the planet are SAP, Oracle and Sage. SAP had

recently over \$6B altogether ERP programming income in 2012, driving the around the world advertise with 24.6% piece of the overall industry. Prophet had \$3.12B and Sage, \$1.5B in programming incomes for 2012. Prophet's piece of the overall industry was 12.8%, and Sage, 6.3% (Forbes, 2013).

In light of sharp challenge for control of the remunerating ERP bit of the general business, the merchants are tenaciously invigorating their things and including new advancement based features.

Business is nowadays, dependably dynamical and has over up being logically flighty with valuable units requiring additional} more bury division information stream for essential initiative, favorable and profitable getting of components, the officers of stock, accounting, unit of time and appointment of product. In such means, profitable info systems would improve force through value drop-off and higher collaborations. Afterward, varied affiliations today are trying to find ways in which to traumatize plan their capability and upgrade their organization movement. one such means is that the usage of Enterprise Resource coming up with (ERP) structures, that is clearly the one most distinguished info advancement (IT) theory Associate in Fostering affiliation will build (Teltumbde, 2010). The planet is seeing a move from utilitarian organized structures to business systems amalgamate structures. The real players within the ERP feature nowadays are SAP, Oracle, PeopleSoft, J.D. Edwards, and Baan.

### *1.1.1 Implementation of ERP Enterprise Resource Planning, Global Viewpoint*

ERP systems are once unsure logically gotten by relationship of any kind and size, each in created and creating countries so as to evade targeted noncurrent quality and build sufferable high grounds (Al-Mashari, 2011; Wasis and Wasis-Brown, 2016). ERP is suited having the complete relationship underneath its impact by checking materials, orders, plans, finished stock product, and alternative key info that are basic to the organization. These frameworks are intended to incorporate and enhance different business procedures like monetary bookkeeping, request passage, deals and circulation, HR, materials the executives and creation arranging over the whole association. As per different reports, in excess of 30,000 associations worldwide have executed ERP frameworks. In a University setting the benefits are great. These include but limited to improved customer satisfaction, for instance, students can easily check their fee balances, results via online portal instead of queuing. In addition, there is increased information accuracy due to centralized data as opposed to multiple data sources, improved management of student debts, higher fee collection, improved processing of examination / graduation results as well as Improved efficiency in record keeping and retrieval student data (Kipng'eno, 2017).

Generally, fabricating parts treat each exchange severally, as they're worked around solid limits of express capacities that a specific application is meant to produce food for. ERP stops seeing trades as keep singular activities and take into account them as a motivating a part of the interlinked techniques that compose the business. It begun the quality that the total is additional important than the total of its components (O'Leary, 2013). In 1960's most affiliations organized, created and dead brought along computation structures, usually modernizing the stock management systems exploitation stock control (IC) teams. These were heritage structures subject to programming vernaculars, for example, COBOL, ALGOL and FORTRAN. In 1970's Material demand designing (MRP) including organizing the factor or half wants as incontestible by professional age arrange and later in Nineteen Eighties to producing Resource designing (MRP II) systems that underlined on streamlining amassing method by synchronizing materials with creation necessities management (SCM). on these lines within the middle 1990's ERP structures had all the center parts of associate degree affiliation.

In lightweight with the making overall check, affiliations comprehensive is moving towards the execution of ERPs in an exceedingly voyage to expand company favored position in varied markets. it's from the given institution that varied affiliations nowadays are outlay vast whole in capital use to upgrade their info the administrator's systems. per Beheshti and Beheshti (2010), the rule motivation driving the big interests in ERP structures is to upgrade potency, ampleness and what is more varied multileveled executions. Their choices are prefaced on the accept that great data frameworks enhance quick basic leadership which are solid, capacity to tackle issues quick enough, capacity to practice carefulness with the accessible data and the general effect on the association. With an effective execution of a data framework, it will achieve change in an association which was influence the manner in which an association does its exercises. This examination along these lines takes a look at the procerassing procedure of an ERP framework.

### *1.1.2 Implementation of ERP Enterprise Resource Planning in Africa*

African nations, as the vast majority of the creating nations, are invested with a particular setting. This setting is described by low financial limits, constrained frameworks, restricted human aptitudes, and a specific culture (Al-Debei and Al-Lozi, 2012). Asamoah et al. (2015) recognized a few components like culture of debasement, immature information culture, and frail authoritative control as the components that must be viewed as when considering ERP usage in Africa. The implementation of ERP is low across African countries and this is worrisome given the rapid and unstoppable dynamism in the global business market. Africa is still staggering behind in embracing this great technology.

Studies across Africa point to the fact that ERP implementation has not kicked off as conceptualized and this is likely to affect its operationalization. Scholtz and Kapeso (2014)'s study in a few nations of Africa which included South-Africa, Kenya, Malawi, Mauritius, Mozambique, Zambia and Zimbabwe, it was noted presentation in Africa is moderate. Ansen (2014) recommends the present ERP showing homeroom in African Universities to address ICT aptitudes deficiencies and human capital holes in this unique situation. An understanding of the factors affecting its implementation in institutions of higher learning is necessary for this was to help ERP managers and Institutions leadership to improve its effectiveness.

### *1.1.3 Implementation of ERP Enterprise Resource Planning in Kenya*

In Kenya ERP implementation is encouraged across the country. All the government departments and the 47 counties are keen on the implementation of ERP projects. The counties have revised their ICT policy with a view of prioritizing these ICT projects, because they understand how management of information is critical. According to the Meru County and Tharaka Nithi County ICT strategy the attention is on getting to, actualizing, creating or utilizing County Government of Meru ICT based Information and all the ICT assets that it claims, oversees, underpins or works. It identifies with all the Information innovation assets, administrations and offices PCs (Laptops and work areas), Ipad, web, phone framework, printers and copiers, working frameworks, servers, programming, databases, remote correspondence, email frameworks and ERP. All representatives, colleagues and the volunteers should follow with the arrangement.

The use of ERP in organizations in Meru County and Tharaka Nithi County is also evident in the universities operating within the County. The Universities operating in the Counties include: Chuka University, Meru University of Science and Technology and Kenya Methodist Universities. However, as earlier mentioned by Kipng'eno ERP system implementation experiences several challenges both internally and externally and this is the focus of this study.

### *1.2 Statement of the Problem*

Management of information in universities is a powerful driver towards successful execution of their mandate, as it determines organizational growth and sustainability (Siriginidi, 2007). The viability of ERP in culminating this craft of the board of data can't be insulted and is named one of the real data innovation advancements in the today world. Various examinations have been done in the course of the most recent decade on this region of ERP (Al-Mashari, 2011). The traditional functional systems used in universities were costly, rigid and slow. This negatively affected the effectiveness of these organizations. ERP frameworks are contended to improve hierarchical viability by upgrading effectiveness through decreased expenses and time of

finishing business exercises. However, this is not the case as revealed by studies in Kenya. There are often reported cases of system failure, consequently, taking these institutions back to the functional system era days, and at times worse than that.

Studies demonstrate that such adequacy is influenced by foundational issues, for example, top administration support, end client preparing, representative cooperation and merchant support, utilization of an advisor, for the most part fundamental issues. The way that most investigations in Kenya have given little consideration to ERP framework usage in universities is a great concern, considering the expenses brought about while setting up the frameworks. The vast majority of the investigations on ERP frameworks have fixated on assembling and business divisions. With a glaring absence of lucidity on usage, encounters particularly in universities as they look to execute ERP frameworks there is requirement for an examination to uncover execution encounters for universities in Kenya. This is regardless of the way that most ERP merchants keep on giving more consideration to universities in the creating nations to grow their piece of the overall industry.

This investigation concentrated on the elements that add to effective usage of ERP frameworks in Kenya with specific accentuation on the hierarchical elements. Usage of ERP in Kenya's Universities has not been without troubles and University within Meru and Tharaka counties are not exceptional. Be that as it may, there was constrained research on the foundational issues influencing usage of enterprise resource planning system in universities within Meru County and Tharaka Nithi County.

### *1.3 Objectives of the Study*

The overall objective of the study was to investigate the systemic issues influencing the enterprise resource planning system implementation in universities within Meru County and Tharaka Nithi County.

#### *1.3.1 Specific Objectives*

- i) To determine the influence of top management support on the implementation of ERP system in universities within Meru County and Tharaka Nithi County.
- ii) To establish the influence of end user training on the implementation of ERP system in universities within Meru County and Tharaka Nithi County.
- iii) To establish the influence of organizational communication mode on the implementation of ERP system in universities within Meru County and Tharaka Nithi County.

iv) To determine the influence of use of ERP consultants' support on the implementation of ERP system in universities within Meru County and Tharaka Nithi County.

#### 1.4 Hypothesis

The following hypotheses were tested in the study;

**H<sub>01</sub>** Top management support does not have influence on the implementation of ERP system in universities within Meru County and Tharaka Nithi County.

**H<sub>02</sub>** End user training does not have influence on the implementation of ERP system in universities within Meru County and Tharaka Nithi County.

**H<sub>03</sub>** organizational communication mode does not have influence on the implementation of ERP system in universities within Meru County and Tharaka Nithi County.

**H<sub>04</sub>** Use of ERP consultants' support does not have influence on the implementation of ERP system in universities within Meru County and Tharaka Nithi County.

#### 1.5 Justification of the Study

The territory of study with regard to components adding to effective usage of ERP frameworks in Universities within Meru County and Tharaka Nithi County has been with very little analysis and documentation. Most of the affiliations that have instituted ERP systems in African countries have incorporated them within the last 10 years per se as time cruises by, way more affiliations would wish to hitch their business shapes by accepting and investing in ERP structures. This study thus was geared towards serving to such organizations to spot the key factors that cause self-made implementation of the ERP systems. The knowledge obtained from this study is helpful to the University management in guiding policy formation.

#### 1.6 Assumptions of the Study

This exploration research made a few suspicions which incorporate. To start with, the respondents from the tested populace was to be engaged with the execution of the ERP framework in the association and was thought to be educated on the investigation zone and consequently expected to give important data for the examination. The examination focused on respondents in the sampled universities that gave target data that is required. The examination expected that information gathered was sufficient to make substantial determinations in the investigation.



### *1.7 Scope of the Study*

The research study was carried out in universities within Meru County and Tharaka Nithi County among ICT staff and heads of functional departments in the Universities. This analysis study targeted on the structure factors influencing implementation of ERP systems by universities inside Meru County and Tharaka Nithi County. The examination chose Meru County and Tharaka Nithi County as it has been distinguished as an IT center in the Kenya, which is bore witness to by Universities which are advertise pioneers of ERP, for example, Oracle and SAP. The investigation drew statistics from Universities inside Meru County and Tharaka Nithi County which had effectively actualized either Oracle or SAP ERP frameworks.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### *2.1 Introduction*

This section covers the hypothetical audit, observational survey and theoretical structure. The audit centers on the execution of ERP frameworks, development and diagram of ERP, Business Process Reengineering, and advantages of actualizing an ERP framework, factors which add to fruitful usage of ERP frameworks.

#### *2.2 Theoretical Review*

##### *2.2.1 Diffusion of Innovations (DOI) Theory*

Dissemination of Innovations (DOI) Theory was instituted by E.M Rogers in 1962 and later changed in 2003. It's a typically used hypothesis in social science disciplines. The hypothesis has its premise in interchanges and tries to clarify however a plan or item picks up energy and spreads through a selected public or social framework. The aftereffect of this dispersion is that purchasers take up the new thought or development. choice as brought call at the hypothesis settle for that purchasers respond contrastingly to associate degree advancement contrasted with past things or developments. This encourages the dissemination procedure.

Dispersion of Innovations Theory sets that hypothetically, 49%-87% of the fluctuation of a pioneer's pace of appropriation is processed by its apparent properties, type of development selection, and nature of social framework that the advancement is scattering and also the degree of the operators' advancement endeavors in diffusing the advancement (Nzuki, 2012). The hypothesis is efficacious to each the engineers and purchasers of ERP frameworks in assessing however these frameworks are existent in several activities. As contended by Rogers (1995), associate degree advancement, for instance, utilization of Enterprise frameworks within the executives of advanced education organizations is viewed as a mechanical development. This is acknowledged because of change in perspective from remain solitary data frameworks to coordinated data frameworks.

While guided by the dispersion of advancements hypothesis, the specialist looks to set up the institutional encounters during the execution period of the ERP frameworks in state funded universities.

### 2.2.2 *Scientific Management Theory*

This assessment is bolstered by Fredrick Taylor's (1880) legitimate organization theory typically referred to as Taylorism, it's a speculation that dismembers on work streams to enhance money potency Fredrick Taylor started the Scientific Management advancement, and he and his accomplices were the basic folks to think about the work methodology deductively. They thought-about however work is performed, and that they looked this wedged authority gainfulness. Taylor's perspective revolves round the conviction that creation folks work as arduous as they may and not as profitable as streamlining the approach during which the work is completed. In his 1909, dissemination referred to as the Principles of Scientific Management, Taylor urged that by overhauling and remodeling occupations, effectiveness would increase. This hypothesis was on these lines manage U.S. choose, what are some of the variables which might facilitate accomplish proficiency and most extreme potency of a employee.

As shown by Taylor, there are four gauges of legitimate organization that include: Replace operating by "reliable rule," or basic inclination and perspicacity, and rather use the coherent procedure to check work and opt for the foremost profitable thanks to trot out perform categorical tasks; instead of primarily consign staff to only any occupation, facilitate authorities to their livelihoods subject to capability and motivation, and train them to figure at the most distinguished viability; Monitor knowledgeable execution, and provides headings and management to make sure that they're victimisation the foremost capable techniques for working; allot the work among boss and staff with the target that the managers contribute their vitality orchestrating and preparing, empowering the staff to play out their assignments with success. The subsequent guideline demands occupation preparing of a worker which by expansion alludes to preparing the representative on new abilities in the event of progress in the manner the association has been doing its procedures.

The theory acknowledges the fact all stakeholders using a given system need to be adequately trained. In this study, there is emphasis on the need for the end user to be trained. When the end user is adequately trained then system effectiveness is guaranteed.

As incontestable by Davenport and Iyer (2009) a business strategy may be a ton of dependably connected tasks performed to attain a pictured business result. Business method re-building is usually referred to as business system update, business amendment, or business strategy amendment the board. on these lines BPR has been delineated as a definitive organization approach which might be pursued to structure speculation.

### 2.3 *Enterprise Resource Planning Implementation*

Undertaking Resource coming up with (ERP) is represented as organizing of advantages in an exceedingly business. As incontestable by Markus and Tanis 2010, ERP structure is business programming that directions trades organized information and business shapes throughout a corporation. As shown by Marnewick and Labuschagne (2015), ERP is associate item cluster that joins each the business techniques and data Technology (IT) options. Associate ERP framework was subsequently coordinate every one of these procedures through programming which was improve consistent progression of data inside and without the limits of the association. ERP framework is accordingly, viewed as an intricate framework to execute and along these lines, there is requirement for cautious arranging and appropriate assignment of assets to guarantee its prosperity.

Siriginidi (2018) clarifies that ERP has different modules which was incorporate building information control; deals, buy and stock; material prerequisite arranging (MRP); asset stream the board; works documentation; shop floor control and the board and others like costing, upkeep the executives, coordinations the board and MIS. the model likewise incorporates regions, for example, fund, coordinations, HR and work process.

Shehab et al. (2004) directed a complete audit of the exploration writing (1990-2003) crosswise over Europe concerning ERP frameworks is exhibited. The writing is additionally arranged and the significant results of each examination are tended to and dissected.

#### 2.3.1 *ERP System Modules*

In their investigation, Chien and Tsaor (2007) commented on the authoritative effects of ERP framework divided as two classifications, for example, unmistakable and immaterial advantages. Shahin and Sulaiman (2009) clarified that substantial advantages included decrease of expenses because of diminished representatives, improved efficiency, improved income the board, decrease in coordinations and acquisition costs, improved client administration, decrease deprived for framework support. Then again, impalpable advantages of an ERP framework was incorporate, improved and inclusive of new business forms, better access and the board of corporations with information, improved feedback to client solicitation and questions, expanded adaptability, with upgraded business execution, financial effectiveness in staff and by and large efficiency. Having now figured out what effective ERP usage involves in the past passages, deciding regarding what variables could have added to this fruitful execution has been a subject of research by different researchers all the more so in the created nations.

Ondřej (2012) directed an examination on ERP System Implementation in Small and Medium-Sized Enterprises in the Czech Republic. A subjective exploratory research approach is connected to respond to the examination question. The examination is directed through a mix of writing audit and contextual investigation look into. The examination discovered that the job of proprietor administrators, extraordinary business procedures, and phase of hierarchical development are significant viewpoints concerning ERP framework execution in SMEs. What's more, the specialist sees that the errand of ERP framework usage in SMEs was typically done by a merchant or counseling organization, and should be possible through different execution strategies. However apart from being in different geographical location, the study focused on SMEs and not public universities.

Breakfield and Burkley (2002) portray ERP as a vital instrument that helps organizations increase upper hand by coordinating all business forms and streamlining accessible assets. This enables a venture to convey worth included items and administrations in the most limited time conceivable. ERP replaces remain solitary applications by giving different modules dependent on a typical database and comparative application interfaces that administration the whole venture as opposed to bits of it. Preceding the rise of ERP, workers needed to recover data from at least two separate registering frameworks making their activity very troublesome. Putting away information in a solitary spot and making it accessible to everybody inside the association enables everybody in the association to know about the present condition of business and to play out their occupations better (Valacich and Schneider, 2012).

Dezda and Ainin (2011) considered an impact of authoritative factors on fruitful ERP usage in Iran. Observational information were gathered through a review survey. The surveys were appropriated to chosen administrators of organizations embracing ERP frameworks in Iran. In the investigation the scientists saw that there were numerous instances of ERP execution disappointment in created nations and finances that have high IT development and great IT framework, great ERP exposure.

The findings show that the main organizational factors affecting implementation included companies' top management and adequate user training and education pertaining to the systems. However, the researchers' context was on companies engaged in trade and not educational institutions of higher learning. Furthermore, the question as to whether such failure in ERP implementation is witnessed in in developing countries needs to be answered.

Moohebat, et al. (2010) directed a similar investigation of basic achievement factors (CSFs) in execution of ERP in created and creating nations. The study used data from 34 developed economies and 149 developing economies. The research relied much on secondary data obtained using document analysis approach. The investigation built up that national culture of creating nations affected ERP execution. Nonetheless, their investigation was at a national level and not the hierarchical level.

Shah et al. (2011) investigated the obstacles of fruitful ERP execution in open associations in Pakistan. Contextual investigation look into system was embraced and Semi-organized meetings of the top administration, end clients, and undertaking group were directed during the examination. The investigation uncovered that authoritative factors, for example, top administration support, client inclusion, merchant support, ignoring of progress the board viewpoints, turnover of sellers' colleague, move of top administration in recipient foundations were key components influencing fruitful usage of ERP frameworks in the associations. Different variables distinguished incorporate task cost invades and deferred venture timetables and their impact on client necessities. However, the focus of their study was public organizations in a different country with distinct systems and structures.

Al-Mashari (2011) concocted 12 basic achievement factors that add to effective usage of the ERP framework, for example, Project the executives, ERP determination, preparing and training, social and basic change the executives, then again, Somers and Viscount Nelson (2013) came up and perceived a outline of twenty-two elementary accomplishment factors in ERP utilization among them, high organization support, steerage on new business structures. On a comparative district of study, Oom Paul Kruger and Rudman (2013) organized the accomplishment factors in 10 categories among them obligation by high organization, astonishing organization from endeavor the officers. From these examinations, it's astonishingly positive that no specific technique is wont to mastermind these elementary accomplishment factors that raise ERP utilization in a very productive manner.

#### *2.4.1 Top Management Support*

Dezda and Ainin (2010) characterize Top administration support as the responsibility of the top initiative or the managing administration as is ordinarily eluded in the undertaking of ERP execution. This was distinguished as the main factor in the achievement of ERP framework usage at the underlying execution organize as well as all through the usage procedure. From the definition, unmistakably the job of top directors

ought not be insulted. The impact on ERP execution can be either positive or negative contingent upon association's quality or shortcomings.

Dezdar and Ainin (2011) considered the impact of hierarchical elements on fruitful ERP usage in Iranian organizations. The considered inspected hierarchical elements including top administration backing, preparing and training, undertaking wide correspondence) that may impact the endeavor asset arranging framework execution achievement in Iran. Exact information was collected by means of a study survey. The surveys were appropriated to chosen administrators of organizations receiving ERP frameworks in Iran. The outcomes demonstrate that the institutions' top administration must detail and help with the duty to the task if the framework is to be fruitful. Furthermore, the executives should likewise guarantee the plans are imparted and comprehended by the whole organization. This investigation was to setting up whether top administration gives full help and responsibility towards the practice of the ERP framework and what the impact on the framework's execution is.

Ganly (2012) while considering ERP usage in the United States of America called attention to that Executive authority from such people as the CEO, COO, CIO and other ranking directors who must be completely connected with and focused on the ERP venture. Ganly (2012) demonstrated that dependent on the ERP frameworks exercises realized, what was required were more prominent worker support, greater interest in preparing, just as more accentuation on a change the executives program. This subsequently implies the top administration in state funded college a basic job of guaranteeing that workers are arranged and urged to take an interest in the execution of ERP framework.

Clemons *et al.* (2008) studied behavioral factors contributing to reengineering risks in the United Kingdom. Questionnaires were administered to senior managers and ICT managers. The study found that found successful ERPs adoption and implementation was highly affected by the way team members are selected and managed. The investigation suggested that the group the executives ought to be knowledgeable about different methods, for example, key visioning and change the board. They additionally feel that incorporating individuals with aberrant experience is beneficial in bringing new thoughts and difficulties, and they promoter considering clients in ERPs appropriation endeavors. The inquiry that develops is whether top administration in Kenya's universities is knowledgeable about different procedures, for example, key visioning and change the board, and if this appropriately adjusted ERP frameworks.

Grint (2011) studied extant aim and customs at work in the United Kingdom. The study was carried out amongst UK companies and researcher used questionnaires to collect data from senior management staff. The analyst found that the most significant factor when receiving and executing ERPs is the top level administration's promise to the vital course itself. Grint's findings show that the level of commitment from the top management team had an effect on the implementation of the ERPs if not taken seriously. This study is keen on finding out if this top management attribute affected ERPs implementation in public universities.

Kipnge'no (2017) conducted a study on the operation of ERP in Kabianga University, Kenya. The investigation received the elucidating examination plan and gathered information utilizing polls. It was set up top administration was a basic factor impacting the usage of ERP. The specialist further clarified that the job of the top administration in the usage incorporates: defining Success. The CEO is responsible for the success or failure of the ERP system; and setting and managing the expectations of the University as far ERP system is concerned. The major role is that of Change Management agent. There are stakeholders who resist the introduction of new ways of doing business; business re-engineering and thus, the top managers need to ensure that this is well managed. However, top management characteristics vary from organization to organization and thus these findings should not be postulated to other universities in Kenya

Upadhyay et al. (2011) examined the elements affecting ERP Implementation in Indian Manufacturing Organizations. The examination found that top administration backing and duty emphatically impacted effective ERP execution. The analysts focused on the way that top administration ought to rouse the individuals to give the key task records, sign offs on schedule, overseeing office work and undertaking work effectively by giving prizes or strengthening the advantages. However, the focus of their study was not on universities and thus, this study was help establish this association.

As indicated by Ngai et al. (2008) inspected the basic achievement factors in the appropriation of big business asset arranging in the Computer Industry in Iran. The examination inferred that top administration was a significant factor in the execution of ERPs, in light of the way that the ERP undertaking isn't just enormous scale yet additionally requires monstrous assets for them to succeed. The investigator battles that ERP systems was require re-structuring and on an extremely essential level changing of a segment of the business structures, thus the top chiefs are required to offer the association and stewardship so as to modify the present business process and any new methodologies that were required.



Peterson and Zhang (2011) inspected the connection between top supervisory crew mental attributes, transformational initiative, and specialty unit execution. The analysts noticed that top administration backing has two noteworthy viewpoints in the execution of ERP framework, the first, is showing the vital initiative and second is that they offer the required assets for colossal errand. The accentuates was on the way that ERP usage can't accomplish its point without appropriate authority and satisfactory assets. This investigation conceptualizes that such perspectives if unmanaged can contrarily influence the usage of the ERP program in state funded universities.

#### *2.4.2 End-user training*

Dockery (2014) found that preparation configuration had an impact on preparing viability and along these lines, associations executing ERP expected to give uncommon consideration to this perspective. The specialist noticed that there are a few courses taken when choosing how best to prepare representatives. A few associations settle on a "train-the-mentor and course" approach in which a framework task group and "super clients" train different clients, either themselves or through in-house coaches on the off chance that you have them. Others depend on the preparation given by the product merchant. Giving over part or the majority of the venture to an expert preparing consultancy is another alternative. Or on the other hand the association can in any case can utilize a mix of these methodologies. Dockery further presumes that while realizing an undertaking resource masterminding (ERP) system, thinking little of the significance of representative preparing can prompt the framework's disappointment. This examination was see if Dockery's contentions are appropriate in state funded universities.

Yaseen (2009) examined basic components influencing venture asset arranging usage in the Pharmaceutical business in Jordan. The investigation set up that one of the principle reasons of ERP execution inability to accomplish expected advantages is on the grounds that the frameworks are not totally acknowledged by end clients. This was worsened by the fact that end users were not well trained therefore, they did not comprehend the usefulness and relevance of the ERP in the organizations. Clients frequently utilize a subset of the accessible highlights and along these lines, they should be prepared on ERP usefulness all in all. IT preparing is best on the off chance that it is client engaged and custom-made to people's jobs. Most clients need to see how another framework functions just with regards to how it influences them in their own activity. The emphasis was anyway on pharmaceutical organizations and not state funded universities.

Delgado (2011) contended that ERP has been characterized as a mind boggling and gigantic framework which much of the time targets changing the custom of getting things done and regular business forms. In this way satisfactory preparing and outfitting the end-client with the imperative aptitudes are fundamental to improve productivity and furthermore understand the full advantages of the ERP framework. The scientist saw that, adequate and sufficient preparing can expand the likelihood of ERP framework usage achievement, while the absence of satisfactory preparing can thwart the execution.

Khoury (2016) saw that, executing an ERP framework without satisfactory preparing was have exceptional results. The scientist noticed that numerous organizations would in general quit client preparing and bolster bundles (which are extra expenses). In such case, organizations who quit any client preparing and bolster experience issues directly as it so happens; it could be client obstruction, an excessive number of mistakes due to having workers utilize the framework wrongly. For this situation, the possibility of disappointment of the ERP usage is very high.

As indicated by Ganly (2012), a preparation program would go far towards adding to the achievement of ERP frameworks' execution. At the point when ERP frameworks clients were inadequately prepared or not prepared by any means, the outcome would be ERP frameworks disappointments since clients would be not able tackle any of the ERP benefits. The investigator shows out that it huge train customers for the length of the presence cycle of the ERP systems. Ganly likewise found that preparation spending plans were frequently disparaged by over half. Notwithstanding building up a decent preparing system, it is in this manner important to set up a component to assess the viability of the preparation program and decide required enhancements to be made.

Dorobăț associate degree Năstase (2010) maintains the read that shopper making ready and instruction is viewed because the third most vital consider making ERP use discontent as a result of one rule reason: coming up with is basic in an ERP execution journey not solely to switch} customers to the new ERP system nonetheless even so facilitate within the legitimate change method (Zornada, 2005). obtaining individuals taught/arranged associate degree keeping them taught in the course of the utilization technique should be directed to realize the advantages of an ERP structure.

Noudoostbeni et al. (2010) did associate degree assessment titled "An Effective End-User data Concern coaching methodology in Enterprise Resource coming up with (ERP) supported vital Factors (CFs) in

Malaysian SMEs." The examination centered on spotlights on varied items of the ERP utilised in little and Medium Enterprises (SMEs) in Asian country. The ultimate outcomes of the assessment disclosed that readiness was the foremost large consider advancement or discontent in ERP systems in Malaysian SMEs.

In his investigation, Otieno (2008) saw that, one of the real difficulties confronting execution of ERP frameworks in Kenya is non-presence of very much qualified workers in actualizing associations to deal with the usage procedure of the framework. It is likewise significant that satisfactory preparing of end client was advance straightforwardness with which clients was associate with the said framework, this was basically advance development and furthermore diminish odds of protection from change. Nonetheless, the analyst did not see how preparing of the end client influenced the execution of ERP frameworks.

Kipng'eno (2017) pointed out ERP implementation at Kabianga University was amidst a myriad of end user related challenges. These included: user resistance to change (change management)/blame games; lack of communication: users facing challenges with using the ERP System and failing to communicate to the implementing team in time unless when provoked; and Failure of adherence to agreed deadlines. However, the study focused Kabianga University, whose operational characteristics may be dissimilar to those of universities in Meru County and Tharaka Nithi County. Besides aspects such as end user training were not investigated.

#### *2.4.3 Organizational Communication Mode*

Paulk (2017) in an overview crosswise over global organizations executing ERP found that the view that building up the correct correspondences technique for an ERP usage can introduce a noteworthy hierarchical test. This is particularly obvious when exploring the unsafe waters of hierarchical governmental issues. Innovative ERP interchanges strategies can represent the moment of truth your capacity to effectively execute an ERP framework. A portion of the ERP correspondence strategies utilized by associations include: building up a venture brand, circulating oftentimes posed inquiries (FAQ) archives, set up a task entrance site, using change operators, build up an interchanges plan, and ERP update gatherings.

Somers and Nelson (2013) contends that correspondence between the clients and members is essential for the viability of the ERP execution process. One of the approaches to include the clients is through successful correspondence all through the usage time frame and even before just to empower them to set themselves up for any progressions which was accompanied the ERP framework to try and decrease odds of opposition. Since the

correspondence helps the ERP embracing organization to limit client opposition, it is basic from the inception to the framework right to client acknowledgment stage.

Michlitsch (2010) asserts the necessity for folks to grasp clearly what they need to do if the association must succeed. Moreover, delegates should be provided clear steering to interact them adequately execute the ERP structure. Wheelen and Hunger (2010) states that group action of bearing within the affiliation makes folks to try to to their work as shown by their own viewpoint on what assignments ought to be done, how, and in what demand. This as desires be deals the wants of the affiliation.

In his examination, Kumars (2008) states that correspondence among numerous levels and components of ERP usage undertakings desires a correspondence shall make sure that open correspondence happens within the entire association. Affordable correspondence plans need to be found out to stay senior administration educated concerning the matter of ERP venture sway, difficulties, dangers, and advancement (Muscatello and subgenus Chen, 2008). All of during this manner, the directional board of trustees and therefore the undertakings panel need to envisage to the simplest methodology of correspondence to be received. This might either be pamphlets, email updates, announcements or maybe continuous gatherings simply to stay tabs with the advancement of the venture. winning and auspicious correspondence to each one in all the partners on the update of the venture advancement was improve shopper info sources and valuation for the framework and was address any worries or problems that wasn't be obvious to the client.

Viable correspondence has been recognized together of the foremost hard AND testing assignments throughout an ERP framework usage. In his examination, Nah and Delgado (2011) contended that it's exceptionally vital that employees are educated regarding the degree, targets, exercises and updates prior time to create ERP usage increasingly winning. Correspondence ought to begin early, be sure and chronic, and incorporate an overview of the framework, the needs behind execution it, and a dream on how the business was modification and the way the framework was support these.

#### 2.7.4 *Use of Consultants*

As recently examined, ERP frameworks are remarkable Associate in Fosteringd stupendous to complete later on an clench association would require the administrations of a selected consultant World Health Organization was be the association between the receiving firm and also the implementer. Such Associate in

Fostering skilled will be used to attach the data hole which can exist with reference to the receiving firm. The selection to own Associate in Fostering skilled could be a right of the association receiving the ERP consequently thought of as an authoritative issue.

Dimitrios et al. (2010) directed Associate in Fostering examination on the variables influencing ERP framework usage adequacy in Greek corporations. The assessment of the projected affordable structure was used a recently created poll. The poll was circulated to a gathering of 361 Greek organizations that have dead Associate in Fostering ERP framework. Knowledge innovation (IT) administrators were chosen because the key respondents of the survey. The investigation came upon that the assistance given by outside specialists throughout the ERP usage procedure is key was key within the execution of ERP extends altogether the contemplated organizations.

Pabedinskaite (2010) found that the determination of the proper advisor significantly influences the accomplishment of ERP usage. The utilization of specialists has up to 35.70% job in deciding the accomplishment of ERP execution. The specialist to be utilized in the ERP execution ought to have legitimate learning in the mechanical field and in the ERP framework so that would they be able to assist the organization with developing and actualize a framework lining up with the organization business needs. A significant number of ERP experts have no much involvement in ERP execution process.

Powers (2010) pointed out that ERP vendors form part of the supply chain given that they engage in the supply of ERP systems. If indeed such supplies are not availed in good time, then the implementation of ERP systems was become a challenge. There are three measurements to seller support. One is administration reaction time of the product merchant. Second viewpoint is qualified advisors with learnedness in the two ventures' business procedures and data innovation including sellers' ERP frameworks; and in conclusion cooperation of merchant in ERP execution.

Wang and subgenus Chen (2012) saw that advisor's capability is crucial to ERP usage wasn't run simply except if the people from the hold association, that is, prime administration and purchasers are centered on the appropriation and utilization of the ERP framework. Wang and subgenus Chen (2012) during this method presume, for any ERP to be effectively existent, it has turned into a need for the embracing association to draw in the administrations of an expert. They further contend that, the arrangements that the advisor offers during and after the framework execution straightforwardly impact the viability of the actualized ERP.

### 2.5 *Summary of Empirical Review*

The empirical review demonstrates that ERP implementation across the world is amidst a myriad of systemic and organizational factors. Both developed and developing countries experience these challenges. Studies such as Shehab *et al.* (2004); Shahin and Sulaiman (2009) show ERP implementation is a complex system which needs active participation and the commitment of all stakeholders. Such important stakeholders include; the top management, vendor or engaged consultants and the end users.

The review also reveals that most studies conducted on ERP systems appear to focus mainly on other organizations such as Small and Medium-Sized Enterprise (Ondřej, 2012); and manufacturing organizations (Dezda and Ainin, 2011) with very little attention being paid on public universities. There appears to be limited studies in Africa, as it was earlier indicated that ERP implementation is slow on the continent.

Besides, the observational writing which was surveyed in this examination was worldwide, local and furthermore the little nearby which was recorded. The elements which have added to effective usage of ERP frameworks have stayed comparable in the numerous examinations checked on. In the investigations exhaustively done in America and Europe, factors that have additional to effective execution of ERP are prime administration support, framework alternative criteria, venture the executives, social and auxiliary change the board, instruction on business forms, client preparing on programming, extraordinary usage task group, clear comprehension of key objectives, association pledge to change, information precision among others.

### 2.6 *Conceptual Framework*

The study conceptualized that flourishing implementation of ERP systems by universities inside Meru County and Tharaka Nithi County was full of four structure factors. These are prime management support, user adequate coaching, effective communication and user involvement and additionally call to use authority by the adopting organization. The abstract framework is given in Figure two below.

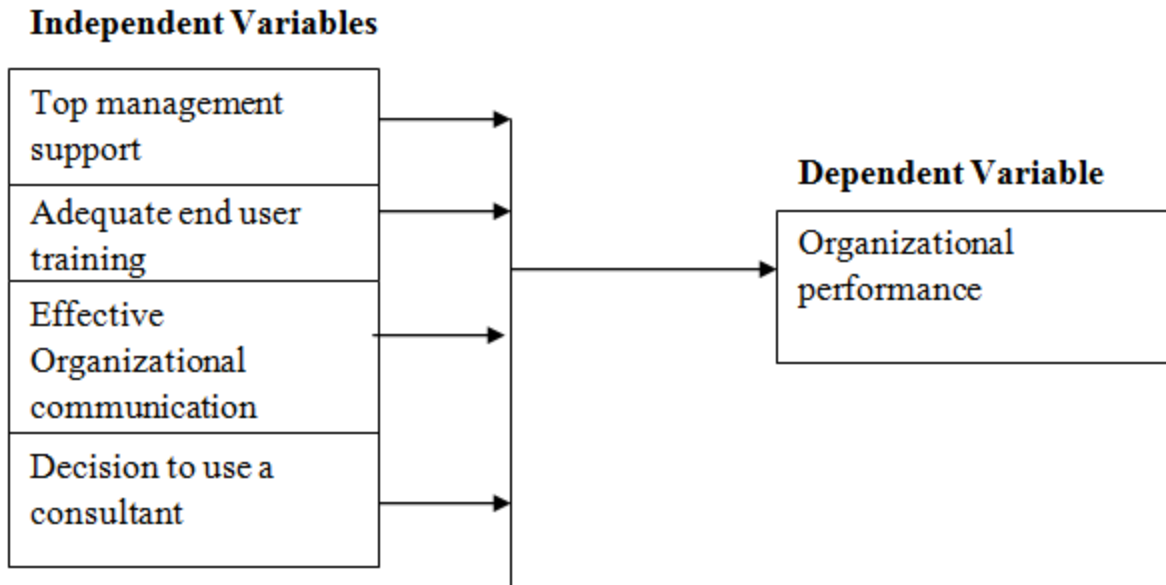


Fig 1:- Conceptual Framework

Top administration backing was conceptualized to feature to fruitful usage of the ERP framework since they're the key basic leadership organ within the association. They facilitate the peace of mind so the| and also the} confidence they need within the framework therefore is a helper to increase cluster to accomplish their objective. The highest administration support likewise demonstrates that they're ready to offer the assets needed to ensure associate degree accomplishment within the usage. Their assistance will generally promise the shoppers that they weren't very to lose their positions as this has been one in all the many feelings of dread with the ERP framework execution. This help anyway ought to not simply be at the underlying stages rather it ought to be all through the usage time frame for it to be viewed as effective.

Satisfactory finish shopper getting ready is another gradable issue that was conceptualized to influence the effective execution of ERP framework. ERP frameworks are well-known to be unpredictable on these lines ample getting ready was needed for the top shopper to limit instances of protection from modification. finish shopper acknowledgment was viewed because the encapsulation of an efficient ERP execution consequently legitimate and satisfactory getting ready is needed for the top client as they're the framework purchasers when the ERP usage. the top purchasers were those WHO understand this business forms consequently should be prudent they be suitably ready within the event that there are changes in business procedures to such an extent that they will beyond any doubt and proactively contribute with thoughts that was be needed to change the new

framework. This preparation is in addition basic significantly in Kenya wherever the accredited ERP getting ready assets are rare and dear.

Another radical factor thought to add to fruitful execution of ERP framework is viable correspondence and client inclusion. Powerful correspondence and client inclusion is viewed as key to fruitful usage of ERP frameworks. In spite of the fact that still thought to be one of the troublesome errands in ERP ventures, correspondence in regard of updates, desires for clients and furthermore the goals of the ERP usage was to a huge degree decide how effective the ERP undertaking was be. Being a coordinated framework, it implies various units require different sources of info and data from other useful units which calls for compelling specialized apparatuses generally any correspondence breakdown was have such genuine outcomes.

Choice to look for a specialist is an additional authoritative evidence that has improved fruitful execution of ERP frameworks in Kenya. With ERP information hole been obvious and furthermore thinking about the multifaceted nature of the ERP frameworks, it is viewed as a need for the receiving association to draw in the administrations of an advisor who have specific aptitude and learning which the workers of the association probably won't have, additionally considering the merchant delegates probably won't be entirely dependable and accessible when required.

## 2.7 *Operationalization*

The parameters used to measure the independent variables are provided in the operationalization framework in figure 3 below.



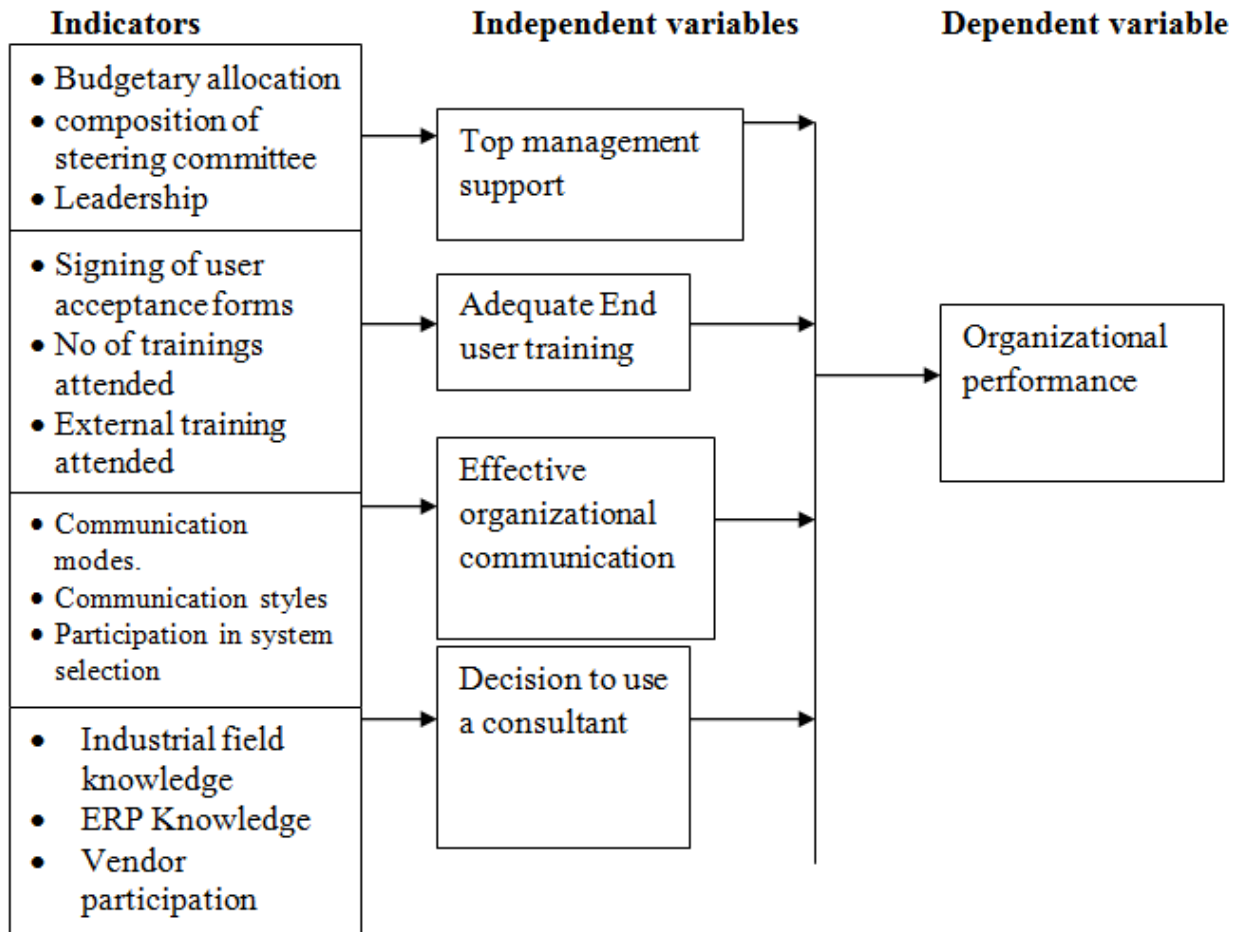


Fig 2:- Operational Framework

Managing administration backing was demonstrated by the organization of the directing panel, spending assignment of the ERP venture. End client preparing was demonstrated by the indication of end client acknowledgment structures, trainings visited and furthermore any outside preparing visited. For viable correspondence and client inclusion, markers were the announcements, gatherings and bulletins which were coursed, association of client in choice of the framework. On the choice to utilize an expert, pointers were whether an advisor was utilized in the usage and furthermore whether the specialist had recently been occupied with another task.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter covers the steps that were followed to hit the analysis findings that were in cycle with the study objectives to handle the research downside. The chapter outlines the analysis style, target population, sampling frame, sampling procedure, analysis instruments, pilot testing, information assortment procedures, however the collected information was processed, analyzed and the way the study findings were bestowed.

#### **3.2 Research Design**

Research configuration is the applied format inside which the study is led; it contains the main focus for the accumulations, estimation and examination of information (Kothari, 2010). This examination was utilizing a clear study configuration, attributable to the idea of the investigation (spellbinding) just as the sort of information required (subjective and quantitative). The structure was utilized to get data concerning the variables impacting the usage of big business asset arranging framework in state funded universities. This empowered an examination of the components that have added to fruitful execution of ERP frameworks in Kenya. This plan is fitting as this examination since it's depicted methodically as a contributing element to effective usage of ERP frameworks.

#### **3.3 Target Population**

Cooper and Schindler (2013) describe a population as the total collection of elements about which the researcher wishes to make inferences. The target populations of this study are all the universities within Meru and Thara Nithi Counties that have successfully implemented Oracle and SAP ERP systems. These are Chuka University and Meru University of Science and Technology. They are selected for study because, these are the existing universities in the area and share uniform structures and similar sources of income and thus a comparison across these universities was be free from bias. The accessible population comprised a total of approximately 30 ICT personnel and 45 heads of department using the ERP systems in the universities (See Table 3.1). The reason is on the grounds that the heads of offices or units are viewed as the super clients of the different modules they use in this way and are in a situation to know whether the ERP addresses the issues and desires for the end client. Moreover, operational/utilitarian/unit supervisors were picked as respondents since

they are among the most educated witnesses with respect to ERP usage extends in associations (Bradford and Florin, 2013). They are in a situation to know whether the ERP framework is effectively actualized or not.

Sample Category	No. of Universities	Population
ICT personnel	2	31
ICT Managers	2	9
Unit/Section Heads	2	25
Total		65

Table 1:- Target Population

Source: Researcher (2019)

### 3.4 Sampling Design and Sample Size

The examination utilized purposive inspecting strategy in the choice of the example of ICT faculty and heads of office. Purposive inspecting is a non-likelihood examining strategy otherwise called judgmental. It very well may be utilized for both subjective and quantitative research procedures. Utilizing this examining strategy, the investigation was test all universities inside Meru County and Tharaka Nithi County which are actualizing the ERP framework or have executed Oracle and SAP ERP frameworks separately.

The sample for ICT personnel and heads of department were calculated using a scientific formula by (Kothari, 2004) as outlined below;

n =

$$\frac{Z^2 pqN}{e^2(N-1) + Z^2 pq}$$

Where:

n = is the sample size for a finite population

N= size of population which is either the number of ICT personnel or heads of department

p = population reliability (or frequency estimated for a sample of size n), where p is 0.5 which is taken for the population and

$p + q = 1$  e: margin of error considered is 10% for this study.  $Z_{\alpha/2}$ : normal reduced variable at 0.05 level of significance  $z$  is 1.96

*i. Sample for ICT personnel*

According to the above formula, the sample size for ICT personnel is:

$$\begin{aligned} n &= \frac{(1.96)^2 \times 0.5 \times 0.5 \times 30}{(0.1)^2 (30 - 1) + [(1.96)^2 \times 0.5 \times 0.5]} \\ &= 56.04222649 \\ &= 56 \text{ ICT personnel} \end{aligned}$$

*ii. Sample for Heads of department*

According to the above formula, the sample size for heads of department is:

$$\begin{aligned} n &= \frac{(1.96)^2 \times 0.5 \times 0.5 \times 45}{(0.1)^2 (45 - 1) + [(1.96)^2 \times 0.5 \times 0.5]} \\ &= 8.6118252 \\ &= 9 \text{ heads of department} \end{aligned}$$

This implies that the size of the sample is equivalent to 56 ICT personnel and 9 heads of department, which constitute the total sample study of 65 respondents.

### 3.5 *Data Collection*

Information was gathered by utilization of polls and meeting plans. Self-regulated poll strategy was connected to gather essential information from the ICT directors, while meeting timetables were utilized to gather information from heads of office in the objective state funded universities. Utilizing polls, information can be gathered from a huge example, privacy is maintained, and saves money on schedule and there is no open door for meeting predisposition (Kombo and Tromp, 2006). Besides, information gathered was both be subjective and quantitative in nature. The survey was set up with inquiries in regards to all the four hierarchical factors in connection to inspected writing. The surveys included both open and shut inquiries. Shut inquiries included 5 point Likert type questions. Larger parts of the inquiries were shut to limit inconstancy of reaction.

The poll is self-regulated and was to be physically dropped to the associations and disseminated to the potential respondents. The scientist distinguished a contact individual in every one of the universities divisions who went about as the contact individual. The contact individual at that point disseminated the survey to the unit/practical/operational heads that use ERP frameworks. As indicated by Bradford and Florin (2013), unit/useful/Operational heads are picked as respondents as they are taken to be the most proficient sources in regards to ERP usage extends in associations. The utilization of a contact individual limited the time taken to fill in the survey and furthermore limit disturbances with respect to respondents.

#### 3.5.1 *Piloting*

A pilot study was done in the neighboring Embu County in Embu University (10% of the example size) utilizing 8 ICT work force and 11 heads of division. Care was taken with the goal that chose respondents for steering don't shape some portion of the inspected respondents. The pilot study uncovered insufficiencies in the surveys before the last information gathering was done (Cooper and Schindler, 2013). Pilot testing enabled the analyst to recognize whether respondents comprehended the guidelines and questions contained in the examination instruments or not. In this way, pilot testing was utilized to decide the unwavering quality and legitimacy of the exploration instrument.

#### 3.5.2 *Validity Test*

Legitimacy of the instrument alludes to the degree to which the instrument estimates what it should quantify (Cooper and Schindler, 2013). Substance and build legitimacy of the instruments was resolved through counsel with college's bosses given that this kind of legitimacy isn't factually quantifiable. The directors gave

exhortation on the organizing of the polls and on the most proficient method to adjust the survey things to the examination goals. The survey was balanced appropriately along these lines upgrading their quality before use.

### 3.5.3 Reliability test

As per Cooper and Schindler (2013) unwavering quality is a proportion of how much an examination instrument yields predictable outcomes on rehashed preliminaries. Interior consistency of the instruments was tried by processing Cronbach's alpha unwavering quality coefficients from the pilot study information dependent on the benchmark of coefficient esteems more noteworthy than 0.7. Orodho, (2008) places that a relationship coefficient of above 0.7 level is viewed as sufficiently high for passing judgment on the instruments as solid. Instruments yielding a relationship coefficient of 0.7 or above was be utilized for the investigation.

### 3.6 Data Analysis

The examination yielded both subjective and quantitative information. Quantitative information gathered from shut finished inquiries was coded and entered into SPSS PC programming databases; sorted out and cleaned of any blunders that may have happened during information accumulation. Expressive insights, for example, frequencies means and rates was processed when examining general qualities of the respondents, and all targets I) to IV). The examination used Pearson connections in deciding the relationship between the autonomous and wards factors. Pearson relationships was gauge the likelihood that the relationship between factors is a consequence of arbitrary possibility or inspecting mistake by contrasting the real or watched dissemination of reactions with the conveyance of reactions we would expect if there were positively no relationship between two factors.

Subjective information was drawn from open-finished inquiries in the polls. These were broke down through outlining the arrangement of perceptions drawn from the respondents. The information were arranged and investigated by classes and sub classifications or topics and sub subjects dependent on the examination goals and research questions from that point inductions and ends drawn.

The consequences of quantitative information were then exhibited as tables and outlines, translated and talked about in like manner, while the outcomes from subjective information was displayed utilizing elucidating investigation in exposition structure.

## CHAPTER 4

### DATA ANALYSIS AND INTERPRETATION

#### *4.1 Introduction*

The general target of this examination was to research variables influencing fruitful usage of ERP framework, an instance of universities inside Tharaka and Meru provinces. This part exhibits the investigation of the consequences of the examination. The introduction depended on the accompanying examination questions:

- 1) What is the impact of top management support on effective usage of ERP framework?
- 2) What is the impact of end client preparing on the fruitful execution of ERP framework in an association?
- 3) What impact does viable authoritative correspondence and client association have on effective usage of ERP framework?
- 4) What is the impact of an expert on effective execution of ERP framework?

The discoveries of this investigation are exhibited in tables and figures below.

#### *4.2 General Information*

##### *4.2.1 Response Rate*

The researcher sent the survey questionnaire which to the identified sample population, which consisted of 65 respondents. The researcher collected 45 filled survey questionnaires from the total sample population. Since the researcher has requested the participants to sign a consent form, the researcher disregarded those questionnaires which lacked a signed consent form. The total number of the disregarded questionnaire was 20. The researcher calculated the response rate of the sample population at 69.23%. As shown by Mugenda and Mugenda (2012), a response pace of 60% is extraordinary while a response pace of 70% or more is commonly surprising; as such the researcher considers a response pace of 69.23% as adequate with the ultimate objective of this examination.

##### *4.2.2 Demographic profile of the respondents.*

Respondents were approached to demonstrate their statistic data. This is currently abridged in table 1 underneath;

<b>Measure/categorie</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative (%)</b>
<b>Gender</b>			
Male	28	62.22%	62.22%
Female	17	37.78%	100.00%
<b>Age</b>			
Below 30 years old	4	8.89%	8.89%
31-40 years old	27	60.00%	68.89%
41-50 years old	10	22.22%	91.11%
Over 50 years old	4	8.89%	100.00%
<b>Education</b>			
Diploma	4	8.89%	8.89%
Graduate	18	40.00%	48.89%
Postgraduate (MS)	22	48.89%	97.78%
Postgraduate (PhD)	1	2.22%	100.00%
<b>Responsibility</b>			
VC	0	0.00%	0.00%
Head of Department	2	4.44%	4.44%
Unit Head	34	75.56%	80.00%
ICT Manager	9	20.00%	100.00%
Other	0	0.00%	100.00%
<b>Employment with this company</b>			
Less than Five years	13	28.89%	28.89%
6-10 years	22	48.89%	77.78%
11-15 years	7	15.56%	93.33%
More than fifteen years	3	6.67%	100.00%
<b>Involvement in ERP implementation project</b>			
Fully involved	34	75.56%	75.56%
Not involved	11	24.44%	100.00%

Table 1:- Demographic profile of respondents

Table 1 illustrates the estimation profile of the respondents. Because it will in common be seen, there were powerfully male respondents veered from female respondents. Too of essentialness to note is that different thirds of the respondents are between the ages of 31-50 a long time whereas over 90% of the respondents hold the next instruction with fair modest of 10% holding an affirmation. The target respondents for this evaluation were the practical heads, and from the table, diverse thirds of the respondents had been working with the



affiliation at the current position for more than six a long time. As saw from tables one over various thirds of the respondents was unit heads with the other 20% being heads of ICT. Of much tremendousness, in addition, is the table shows different thirds of the respondents were besides completely associated with the utilize of the ERP framework. These estimations are mind-blowing signs that the respondents are exceptionally experienced and are fulfilled approximately their connection in this way were the best observers for this examination and to look into this audit.

#### 4.2.3: Tabulation of years of service and intention to change employer

Table 2 below illustrates the years of service for the respondents and their intention to change employer in the next 1- 5 years.

Years of service	Change of Employer in the next 1-5 Years			Total
	Yes	No	Not sure	
0-5 years	30.77%	23.08%	46.15%	<b>100.00%</b>
6-10 Years	45.45%	22.73%	31.82%	<b>100.00%</b>
11-15 years	28.57%	42.86%	28.57%	<b>100.00%</b>
Over 15 years	0.00%	66.67%	33.33%	<b>100.00%</b>

Table 2: Tabulation years of service and intention to change employer

From table 2 over, 30.77% of laborers who have served the relationship for beneath five a long time expected to alter boss within the going with 1-5 a long time whereas 23.08% was not altered and 46.15% do not have the foggiest thought. For the individuals who have served for 6-10 a long time, 45% expected to alter trade, 22% was not altered whereas 32% do not have a clue. Of the individuals who have served for 11-15 a long time, 29% was altered directors within the going with 1-5 a long time, 43% was not alter whereas 29% are uncertain around whether they would alter the trade. For the individuals who have served for more than 15 a long time, none trusts to alter administrator within the going with 1-5 a long time, 66% was not alter whereas 33% is flawed almost whether they would change their chief. Alter of work is key to each trade because it appears the standard for consistency of fundamental delegates. The exit of useful/unit heads in an alliance who are experienced may go with key different leveled capacities and aptitudes, and such an alliance may achieve more costs on planning new unit heads.

4.2.4 Duration on use of ERP, Type of ERP, and sector of operation.

Table 3 underneath outlines the length in which the organizations have utilized the ERP framework, which ERP the organization is utilizing and in which division the organization is in e.g., either private or a parastatal.

4.3 Success of ERP system implementation.

4.3.1 Whether the ERP was successfully implemented.

The respondents were inquired to show whether they think the ERP framework they are utilizing to have been effectively executed, figure 4 underneath outlines the reaction.

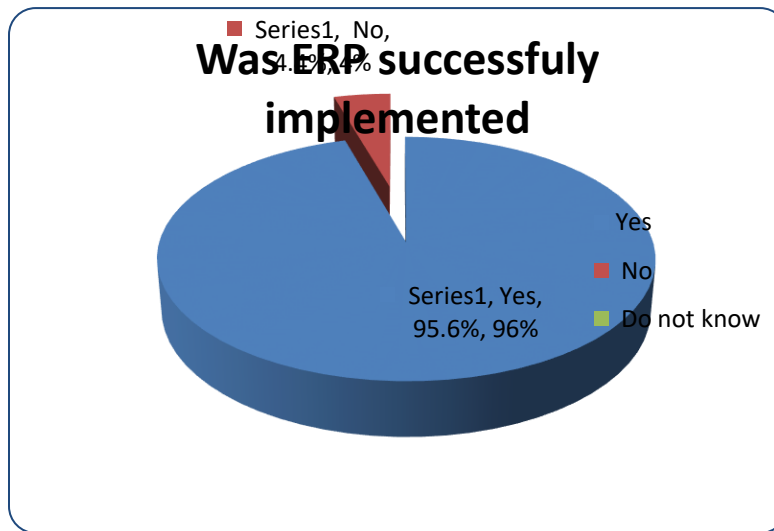


Fig 4:- Whether the ERP was successfully implemented.

From figure 4 over, the respondents were drawn closer to appear whether they think the ERP was viably executed. 95.6% of the respondents' acknowledged that the ERP they are utilizing was a triumph and in this way put stock in it, they continued to precise that they think the ERP since successfully actualized is that the ERP lived up to their wants and were totally cheerful with it, others said on the grounds that they were totally included as a major perspective of the undertaking bunch whereas others said it is on the grounds that it has totally joined the exercises of the organization crosswise over distinctive divisions. At that point, once more, fair 4.4% of the respondents illustrated that the ERP they are utilizing was not effectively actualized. This may well be the circumstance on the off chance that the ERP they are utilizing did not live up to their wants and subsequently were not upbeat with its assignments.

#### 4.3.2 Improved efficiency on service delivery by ERP

The respondents were approached to demonstrate whether after the usage of the ERP there was any enhancement for the productivity on administration conveyance in the association. Figure 5 underneath outlines the reaction from the respondents.

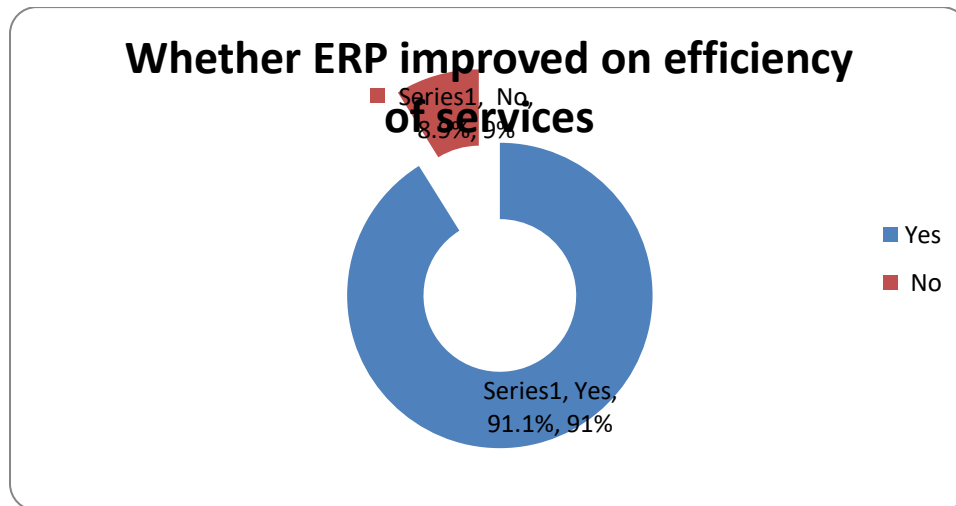


Fig 5:- Whether ERP improved on the efficiency of ERP in the organization

From figure 5 over, the respondents have requested whether the execution from the ERP system in their affiliation improved the adequacy in organization transport within the affiliation. 91.1% of the respondents illustrated that the ERP has overhauled on efficiency in organization movement in their affiliations whereas fair 8.9% appeared that the ERP execution had not made a difference in improving organization transport within the affiliations. In this way, a more noteworthy portion of the respondents concurred that ERP system improves organization movement is sort of saving of time, availability of bound together data.

#### 4.3.3 Whether the ERP made organizational processes more complex.

The respondents were solicited to demonstrate whether, after execution from ERP frameworks in their associations, the authoritative procedures turned out to be progressively mind-boggling. Figure 6 beneath represents the reaction.

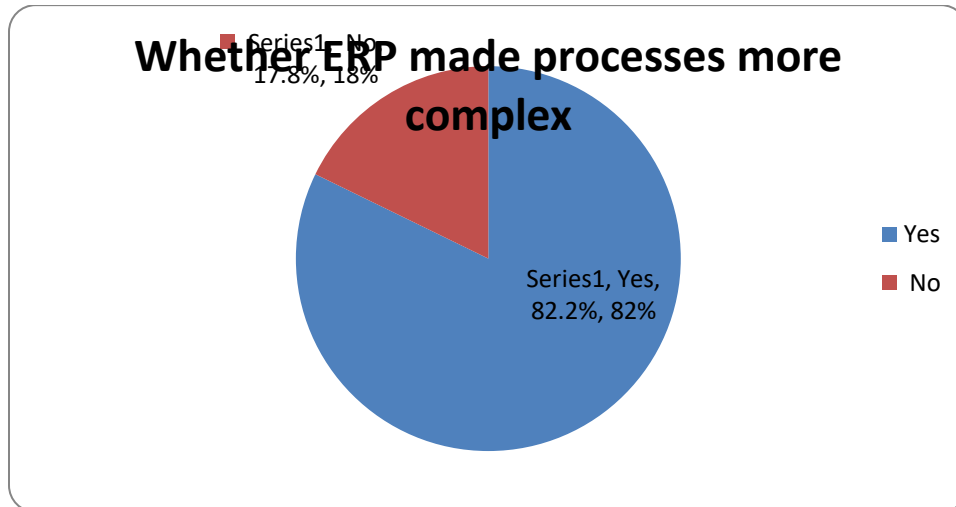


Fig 6:- Whether the ERP system made organizational processes more complex.

The respondents were drawn closer to show whether the ERP systems in their affiliations have made trade shapes continuously erratic. 82.2% appeared that the commerce strategies had not been made complex, whereas 17.8% illustrated that the trade strategies have turned out to be continuously intellect-boggling after their affiliations actualized the ERP system. This might be credited conceivably to destitute correspondence at the utilization level where there was no sensible comprehension on what the execution included. The colossal rate is concurring that the methods were not intellect-boggling after execution can clarify the immense rate, which illustrated that the ERP system was viably actualized.

4.3.4 Possible reasons why ERP was implemented

The respondents were mentioned to demonstrate the potential reasons why their associations chose to actualize the ERP framework. Table 4 underneath represents the reactions given.

Possible reasons why your organization implemented ERP	Average N=45
To improve efficiency in service delivery in the organization	3.64444
To cut on operational costs in the organization	2.68889
As a key business strategy of the organization	3.44444
As a competitive advantage tool to competitors by the organization	3.37778
To enhance the business growth of the organization	2.77778

Table 4:- Possible reasons for ERP implementation

From table 4 over, the respondents illustrated the potential reasons they thought about why their affiliations chose to execute the ERP system. A Likert estimate of 1-4 was given with a scope of from not critical as 1, not noteworthy as 2, critical as 3 and noteworthy as 4. The table talks to in this way talks to the normal/mean on each one of the potential reasons. From the table, a bigger portion of the respondents with a cruel of 3.644 appear that the affiliation required overhauling on its capability in organization movement. The consequent reason appeared by the respondents was key trade method by the affiliation with a cruel of 3.444, the third reason illustrated by the respondents was that, the affiliation required to utilize the ERP system as an upper hand to its rivals with a typical of 3.377. The fourth reason was that so as to update commerce advancement by the affiliation with a cruel of 2.777. The final reason they appeared as the conceivable clarification behind ERP utilization is to cut operational costs by the affiliation with a cruel of 2.688. From this examination, it would at that point be able to be contemplated that an expansive parcel of the respondents acknowledges that by choosing to execute an ERP system, the affiliation had the choice to improve its efficiency in organization transport. This may well be credited to a predominant comprehension of the business tasks of the respondents who were for the foremost portion of the unit or valuable pioneers of these affiliations.

#### *4.4 Factors affecting the successful implementation of an ERP system.*

The second target of this examination was to decide the variables influencing fruitful execution of ERP frameworks for some chose universities inside Meru and Tharaka Counties. The particular targets were; 1) To decide the impact of top administration support on fruitful execution of ERP framework, 2) To look at whether end client preparing of the product adds to the fruitful usage of ERP framework, 3) To inspect whether compelling authoritative correspondence and client association adds to effective execution of ERP framework, 4) To decide if choice to utilize a specialist adds to effective execution of ERP framework.

#### *4.5 Means of factors affecting the successful implementation of ERP systems in organizations.*

This area investigates every one of the elements which influence effective usage of ERP frameworks. The area was available an examination in the type of tables the reaction from the respondents.

##### *4.5.1 Top management support.*

The respondents were inquired to show whether beat administration bolster was basic within the effective usage of the ERP framework. Figure 7 underneath outlines the reaction given.

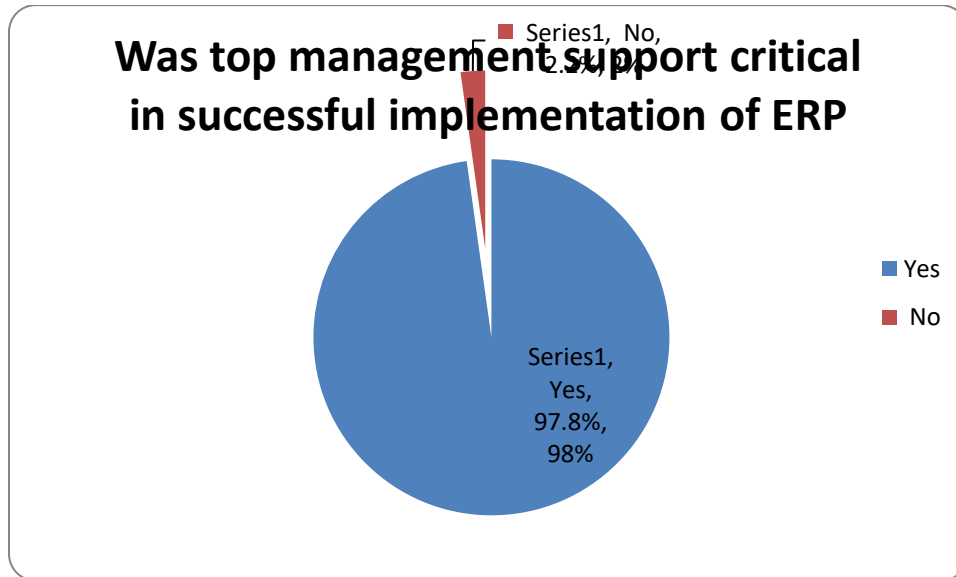


Fig 7:- Importance of top management support

From figure 7 above, 97.8% of the respondents showed that top administration backing was basic in fruitful usage of ERP framework, while just 2.2% idea the help of top administration was not basic. This demonstrates the board should assume an essential job if ERP venture is to be executed effectively.

The respondents were given two proclamations in which to show a rating to what degree the administration exhibited its help for the ERP venture. Table 5 underneath represents the rating by the respondents.

<b>How management demonstrates a commitment for ERP project</b>	<b>Average N=45</b>
Adequate Budget Allocation	4.2222
Composition of the project steering committee	4.2888

Table 5:- Mean on top management support.

From the table 5 over, the respondents appeared that the organization showed obligation for the ERP wander through the organization of the controlling board of trustees with a cruel of 4.2888 whereas palatable investing task for the errand was a moment with a cruel of 4.2222. This illustrates the closeness of best organization in directing sheets of trustees is greatly urgent to show that they are so devoted to the ERP wander utilization.

#### 4.5.2 End-user satisfaction in the success of ERP implementation of ERP project

The respondents were mentioned to show whether end client fulfillment was a basic ineffective usage of the ERP framework. Figure 8 underneath outlines the reaction given.

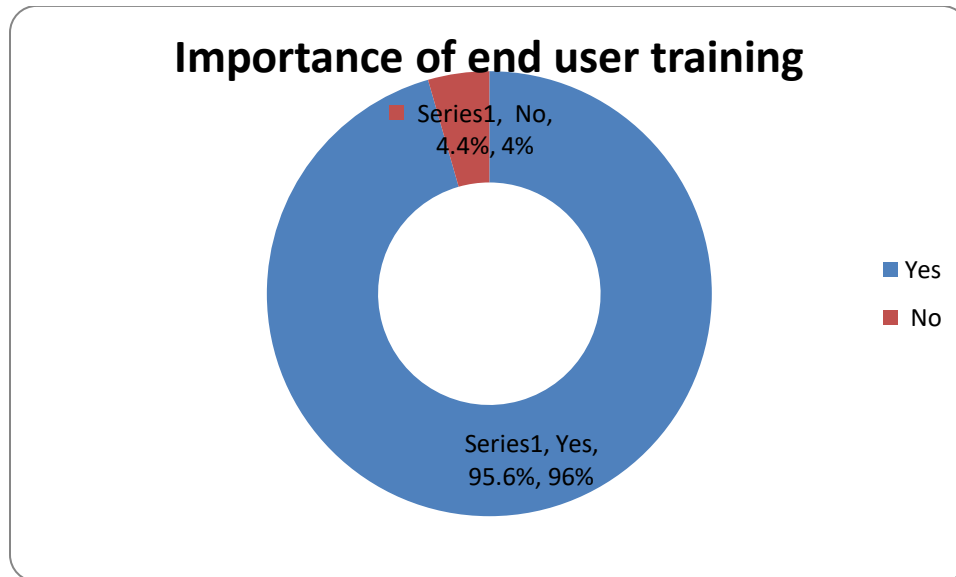


Fig 8:- Whether the end-user training was critical in ERP implementation success

From the figure 8 over, 95.6 of the respondents illustrated that conclusion client planning was fundamental within the productive utilization of ERP system whereas 4.4% appeared the arrangement was not a noteworthy calculates in ERP execution accomplishment. Conclusion client planning is one of the parameters of client fulfillment, which could be a key determinant in advance or disillusionment of an ERP wander.

##### 4.5.2.1 Adequate training of end-user

The clients were mentioned to show whether they were satisfactorily prepared on the ERP they are utilizing. Figure 9 outlines the reaction given.

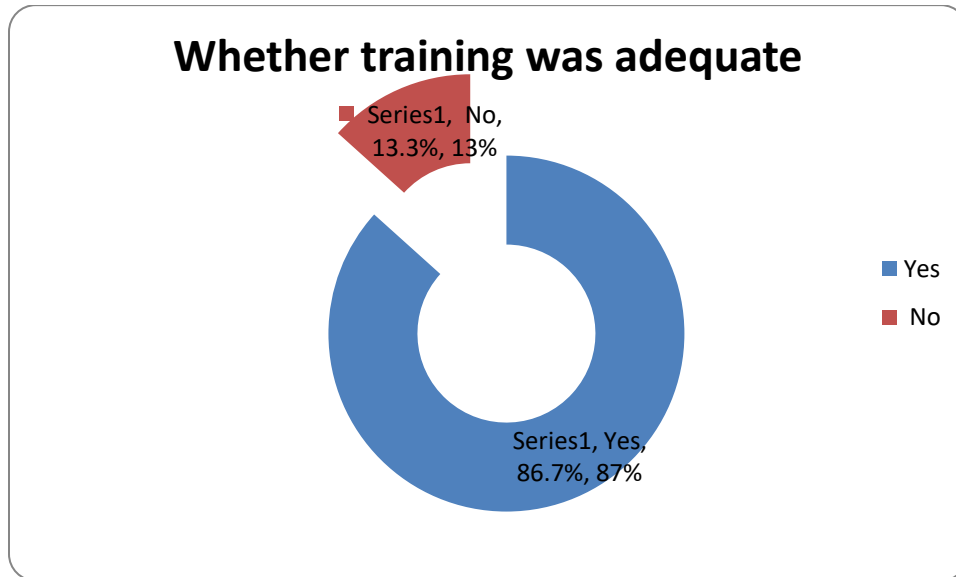


Fig 9:- Whether training was adequate.

The respondents were drawn nearer to appear whether the arrangement which was coordinated on the ERP was palatable to engage them to bargain with the unused system. 86.7% of the respondents illustrated that the planning was palatable with fair 13.3% appearing the arrangement advertised was not satisfactory to engage them to handle the unused ERP system.

4.5.2.2 Mean on end-user satisfaction

The respondents were asked to provide a rating on four regions, which best illustrates the clients were fulfilled with the ERP framework. Table 6 underneath outlines their reactions;

Which statement best describes user satisfaction	Average N=45
The signing of user acceptance forms	4.3777
No of internal training attended	4.2222
External trainings on ERP	3.6667
The system met our requirements and expectations	4.6

Table 6:- Mean on user satisfaction

From table 6 over, the respondents illustrated through rating on what they trust to be palatable client fulfillment. Four potential zones were given to be assessed utilizing a Likert estimate of 1-5, with 1 showing no



influencing, 2 implying small effect, 3 meaning direct effect, 4 meaning exceptional effect and 5 demonstrating the extraordinary effect. From the table the way that the ERP system met the prerequisites and wants for the clients had an uncommon effect on client fulfillment, this was maintained by the tall cruel of 4.6, stamping of conclusion client affirmation structures was another sign on client fulfillment, this was supported by the cruel of 4.377, at that point once more the number of inward training gone to by the conclusion client furthermore was a critical sign that they were cheerful with the system, this had a cruel of 4.2222 whereas eventually, the exterior training gone to by the client was moreover gigantic to show client fulfillment with a cruel score of 3.666.

4.5.3 Organizational communication

This section was to evaluate the effectiveness of communication which had been put in place in these organizations.

4.5.3.1 Effectiveness of communication

The respondents were asked to demonstrate whether they thought the communication amid the ERP execution was viable. Figure 10 underneath outlines the reaction.

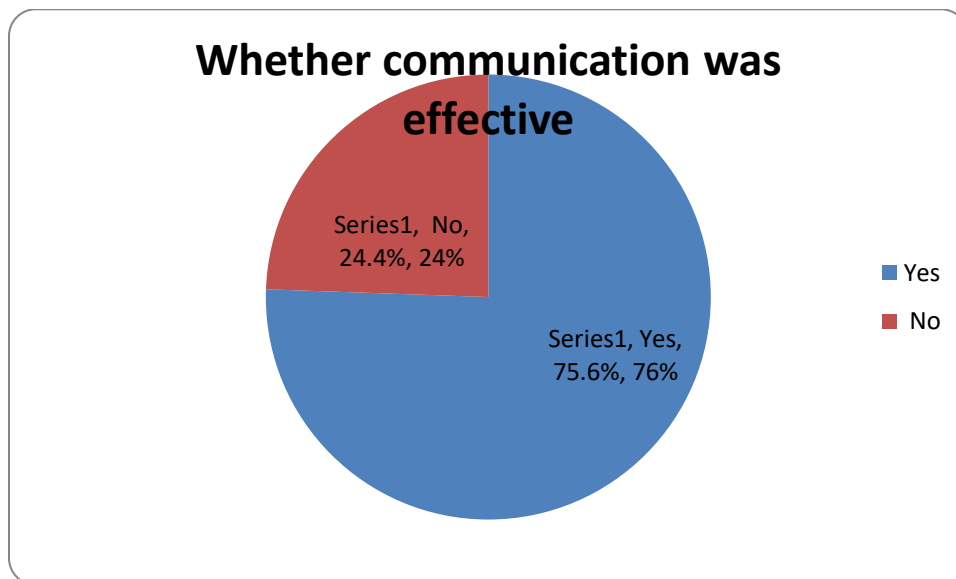


Fig 10:- Effectiveness of communication.

From the over figure 10, 75.6% of the respondents appeared that the correspondence which had been set up amid the ERP utilization was reasonable, whereas 24.4% illustrated that the correspondence was not compelling. In show disdain toward the reality that the lion's share concurred the correspondence was

reasonable, correspondence amid such a colossal and complex errand is critical and got to be taken care of relentlessly.

4.5.3.2 Frequency of communication

The respondents were requested to indicate how frequent communication was done during ERP implementation. Figure 11 below illustrates the responses given.

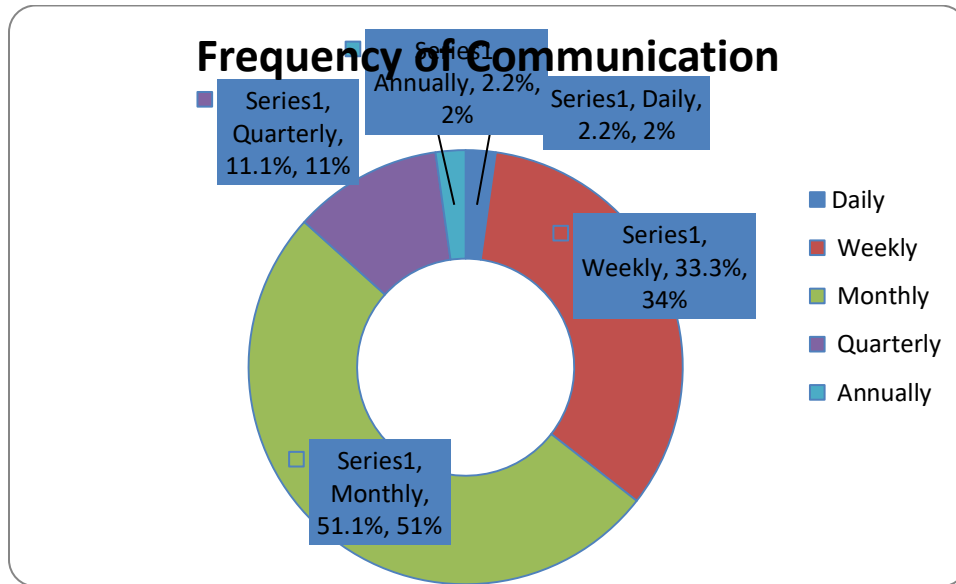


Fig 11:- Frequency of communication

From figure 11 over, the respondents illustrated the repeat with correspondence was done concerning the ERP system upgrades and progression. 51.1% illustrated that in any occasion on a month to month introduce there were overhauls bestowed whereas 33.3% appeared week after week overhauls were passed on, 11.1% appeared a quarterly correspondence whereas 2.2% illustrated each day and annually correspondence separately. This is often a better than average sign that be that as it may it might not have been adequate now and then, correspondence was being given as the ERP wander progressed.

4.5.3.3 Means on communication channels

The respondents were drawn closer to appear a rating the affect on the sort of correspondence utilized amid the ERP wander execution. A Likert estimate of 1-5 was to be utilized with 1 showing no effect, 2 meaning small effect 3 implying direct effect 4 showing mind-blowing effect whereas 5 implied uncommon effect. Table 7 underneath depicts the response the respondents gave;

Which statement best describes an effective	Average
Circulation of newsletters and bulletins	3.5555
Meetings and verbal communication	3.6444

Table 7: Means of communication

From table 7 over, the respondents appeared the strategies for correspondence, which they thought was effective amid the ERP wander utilization. Social occasions and verbal correspondence was situated most critical with a cruel score of 3.644, whereas the spread of discharges and leaflets came at the moment with a cruel of 3.555. In this way most respondents favored get-togethers and verbal correspondence likely in light of the truth that in get-togethers there's a few near to domestic touch and on the off chance that request are postured to one is likely planning to discover a solution, not at all like discharges and handouts which as a run the show may be a single heading correspondence.

#### 4.5.4 Use of an ERP consultant

##### 4.5.4.1 Whether there was a consultant engaged.

The respondents were mentioned to show in the case of during the usage of the ERP framework a particular ERP expert was locked in. Figure 12 beneath represents the reaction from the respondents.

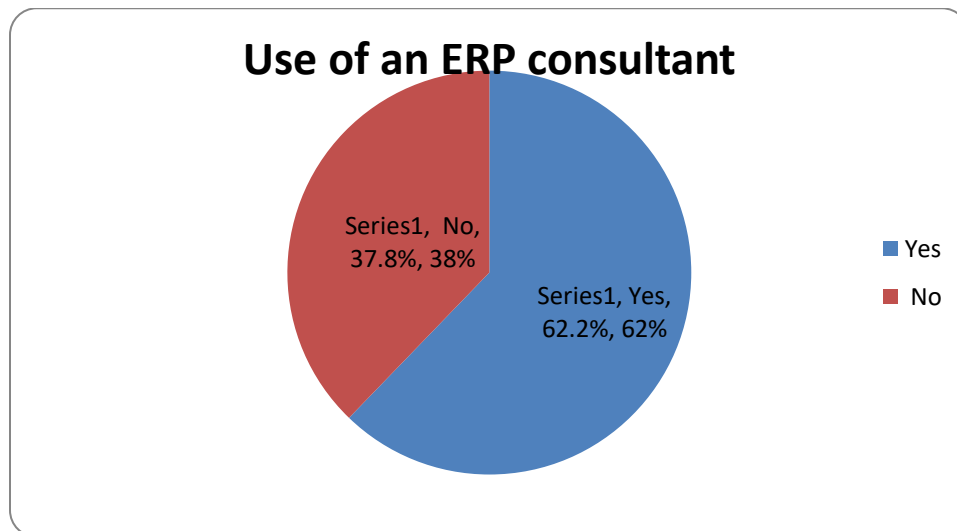


Figure 12: Services of a consultant

From the response as spoken to in figure 12 over, 62.2% of the respondents appeared the organizations of a specific ERP advisor were advertised whereas 37.8% of the respondents illustrated the master was not bolted in. This infers the noteworthiness of the affiliations to overcome any issues between the implementer and the errand bunch, the tremendous lion's share of the advisors are regularly locked in with diverse wanders along these lines they have specific data on the execution of the ERP wanders.

4.5.4.2 Contribution of consultant in the success of ERP implementation.

In the poll, the respondents were approached to demonstrate whether the specialist connected with had any job in they contributed to the accomplishment of the ERP usage. Figure 13 underneath represents the reaction given by the respondents.

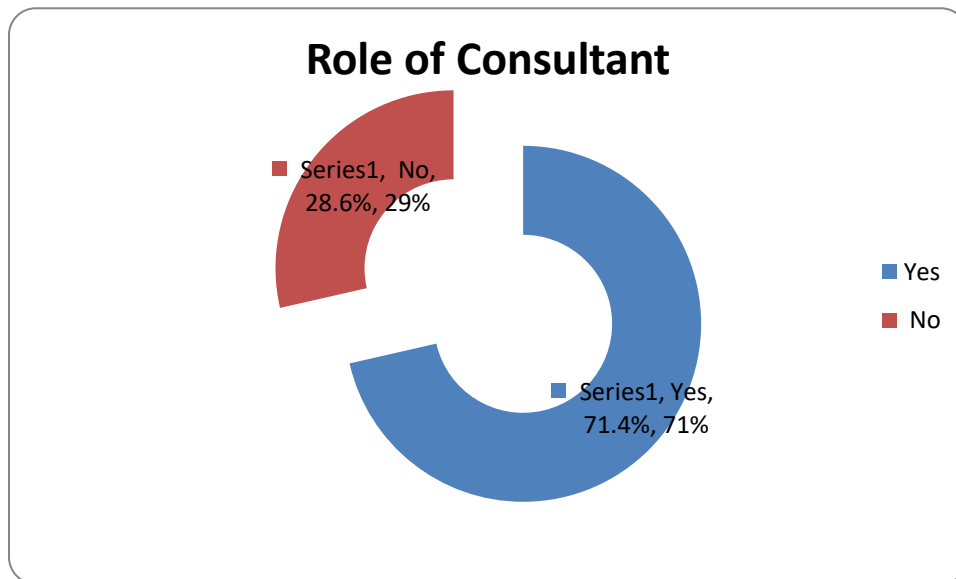


Figure 13:- Role of ERP consultant in success of ERP project implementation

As represented in figure 13 over, the respondents appeared the work of the master possessed with the accomplishment of the ERP wander execution. Of the respondents, 71.4% illustrated the master was basic within the compelling utilization of ERP system, whereas 28.6% appeared that the advisor did not accept an imperative work in productive execution of the ERP system. This means the noteworthiness work the ERP masters play and any affiliation executing an ERP system may consider drawing in an expert.

#### 4.5.4.3 Mean analysis on the role of consultant in the success of ERP project

The respondents were given some potential commitments the ERP expert may have made in the fruitful usage of the ERP venture. A Likert scale was given to demonstrate the rating on every one of the announcements given. Table 8 underneath delineates the reaction given by the respondents.

<b>Which statement best describes how the ERP consultant contributed to the successful implementation of ERP project</b>	<b>Average N=45</b>
The consultant had the expertise and skills required on the ERP	4.357
The consultant bridged the knowledge gap between the users and implementers of the ERP system	4.393

Table 8:- mean analysis of the role of an ERP consultant in the successful implementation of an ERP project.

The respondents were specified to appear the effect on the work of each one of the declarations by the ERP master. Each one of the declaration was to be evaluated. A Likert measure of 1-5 was to be utilized with one meaning no effect, 2 meaning a few effects, 3 showing direct effect four implying exceptional effect whereas 5 implied unimaginable effect. Table 8 over diagrams the response. The respondents appeared that the master crossed over the learning gap between the clients and the system implementers with a cruel score of 4.393 whereas the way that the advisor had the basic authority and capacities came another with a cruel rating of 4.357. This appears the advisor expects a key work in crossing over the data gap between the clients and the implementers; they may essentially clarify districts in which the clients are unpractised with since of the multifaceted nature of ERP system.

## CHAPTER 5

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### *5.1 Introduction*

This chapter presents the summary of the data findings on current status, factors and challenges affecting successful implementation of ERP systems by universities within Tharaka and Meru counties. This chapter is hence structured into summary of findings, conclusions, recommendations and area for further research.

#### *5.2 Summary of the findings*

The general target of this examination was to explore the variables which add to fruitful execution of ERP frameworks by universities inside Tharaka and Meru areas. The particular goals were; 1) To decide the impact of top administration support on effective usage of ERP framework, 2) To inspect whether end client preparing of the product adds to the effective execution of ERP framework, 3) To analyze whether compelling hierarchical correspondence and client association adds to effective execution of ERP framework, 4) To decide if choice to utilize a specialist adds to fruitful execution of ERP framework. Coming up next were the examination questions; 1) what is the impact of top administration support on fruitful execution of ERP framework? 2) What is the impact of end client preparing on the effective usage of ERP framework in an association? 3) What impact does compelling hierarchical correspondence and client contribution have on effective usage of ERP framework? 4) What is the impact of a specialist on effective execution of ERP framework? The investigation received elucidating plan. 65 self-regulated surveys were circulated to the particular associations and 69.23% of the polls were filled and gathered by the scientist. The information accumulation was led between July, 2019 and August, 2019. Blends of enlightening measurements cross organizations, and exploratory factor examinations were utilized to break down the quantitative information.

This examination set up that client fulfillment is essential to effective usage of ERP framework in any association. Of the individuals who reacted, 97.8% said the ERP they are utilizing tastefully lived up to their desires and prerequisites. One of the key pointers for client fulfillment is sufficient end client preparing on the ERP framework. Of the respondents, 95.5% demonstrated that sufficient end client preparing was basic in the effective usage of the ERP while just 4.5% idea it was anything but a significant marker. Additionally, the respondents said they were enough prepared on the ERP they are utilizing with 86.7% demonstrating they were sufficiently prepared and had the important aptitudes to utilize the ERP while just 13.3% showed they were not

satisfactorily prepared. This along these lines shows that, the high the degrees of client fulfillment, the high the probable that the ERP execution was be effective. These discoveries are reliable with the exploration results for concentrates done by Wu and Wang (2007). ERP preparing fundamentally alludes to the way toward giving the administration and the workers on the general ideas of the ERP framework. Preparing ought to be thorough and should address every one of the parts of the ERP; it ought to likewise be ceaseless and ought to stick to the guideline of information move. Full joining of the ERP framework with the activities of the association totally relies upon how well both the top supervisors and the clients are satisfactorily prepared. Preparing is additionally significant as it was empower clients to understand the full capacities of the framework.

Another variable which was tried was the impact of top administration on the accomplishment of ERP framework. Of the respondents, 98% showed that top administration bolster was basic in the fruitful execution of ERP framework; just 2% demonstrated this was not basic. This shows a positive connection between top administration support and effective execution of ERP framework. One of the key pointers of top administration backing was satisfactory spending assignment of the ERP ventures and furthermore the structure of the undertakings directing panels. The respondents evaluated exceptionally the two markers with a pace of 84% and 88% separately as indications of top administration support. These discoveries are predictable with the results of concentrates done by Sawah (2008) and Al-Mashari (2006). The achievement of colossal undertakings like ERP execution completely relies upon supported responsibility from top administration. In their examination, Shahin Dezdar and Sulaiman Ainin 2008 expressed.

Top organization must play a working activity in driving the ERP execution adventure. The board must be locked in with every movement of the ERP utilization and submitted with its own special commitment and capacity to dole out critical advantages for the execution effort. Thusly, the headway of the assignment can be checked persistently. Top organization needs to perceive the endeavor as a top need uninhibitedly and explicitly, to set up the sensible and apt endeavor gathering, to share the activity of new systems and structures through the whole affiliation. Top organization should contribute vital proportions of vitality serving on coordinating or authority sheets of trustees controlling the execution gathering. Top organization must go about as a tutor, keeping his staff induced and in understanding.

Another variable tried in the investigation was the impact of successful endeavor wide correspondence and client association in the pre determination procedure of the ERP. From the investigation, viable extensive correspondence on ERP is decidedly identified with fruitful usage of ERP framework. Of the respondents, 76%

demonstrated that correspondence during the ERP execution was compelling with 24% showing the correspondence was not as viable as it should be. The recurrence of correspondence as shown by the respondents seethed from every day to quarterly with high recurrence being on a month to month premise. ERP activities are typically exceptionally complex therefore viable openness is of the utmost importance for its prosperity. Much of the time, ERP undertakings are unsure and have a ton of questions. Along these lines to lay any feelings of trepidation and stresses particularly to the low end client, it is essential to advise them regarding the advancement and address their desires. This was keep them propelled and stay away from any protection from change which is probably going to happen. Additionally, of significance to be educated regarding the advancement of the ERP undertaking are the providers and clients to realize what is new with the ERP venture. The task group and the controlling board ought to have a decent correspondence plan which is an effective method for clarifying the objectives and targets, courses of events and benefits and that ordinary reports to the top administration are basic. The correspondence plan must have definite territories, for example, the justification for the ERP framework, business forms, show of appropriate programming modules, briefs on change the executives methodologies and furthermore foundation of contact focuses.

The keep going variable tried on this investigation needed to set up the impact of utilizing an ERP advisor on the effective usage of the ERP framework. From the examination, the utilization of an ERP advisor is decidedly identified with the effective usage of ERP framework in an association. Of the individuals who reacted, 62% had the administrations of an advisor had some expertise in their ERP while 38% did not have a specialist in their ERP execution. Likewise, of the individuals who had gotten the administrations of a specialist, 71% showed that the advisor was basic in the fruitful usage of ERP framework. As prior talked about, ERP frameworks are mind boggling and gigantic to do in this way an embracing association may require the administrations of a specific expert who was be the connection between the receiving firm and the implementer. Such an expert is utilized to connect the learning hole which may exist with respect to the embracing firm. The choice to have an expert is a right of the association embracing the ERP subsequently considered as an authoritative factor. Nonetheless, this specialist ought not be believed to assume the job of the receiving association, rather they ought to give the specialized information and the mastery to the embracing association. Anyway able and learned an expert may be, ERP usage was not run easily except if the representatives of the receiving firm are focused on the selection and utilization of the ERP framework. These discoveries are steady with the results of an examination by Wang and Chen (2006) who saw that, for any ERP to be effectively actualized, it has turned into a need for the receiving association to draw in the administrations



of an advisor. They further say that, the arrangements that the advisor offers during and after the framework usage straightforwardly impact the viability of the executed ERP.

### 5.3 Conclusions

After the survey of writing concerning ERP usage, it was seen that there is a hole in the writing as the greater part of the exploration work which has been done particularly on elements impacting effective execution of ERP frameworks concentrated on created nations primarily on the grounds that the vast majority of the ERP frameworks have been created with principle center around associations in these created nations. This was even stressed by Ngai (2008). Be that as it may, there were not many examinations which have been done in creating nations particularly in Kenya for instance the one done by Otieno in 2008 on ERP execution challenges. This investigation anyway inspected the hierarchical factors, for example, top administration support, client preparing, authoritative correspondence and utilization of an ERP advisor and the impact of these components on effective execution of ERP framework. Client fulfillment has been recognized as a definitive measure to fruitful execution of ERP framework.

All in all, what is the commitment of this examination in the scholastic field? The investigation has made noteworthy scholarly commitments in different ways. One the examination has added to scholarly look into by delivering the observational proof which supports the hypotheses of basic achievement variables and ERP execution achievement which have just been widely distributed. The investigation discovered that top administration support, association wide correspondences, client preparing and furthermore utilization of advisors have a positive association with effective usage of ERP framework. This data is basic to associations which might want to embrace ERP frameworks and even those associations which was be executing the ERP frameworks. This investigation would control these associations on what to do and what to maintain a strategic distance from which was thusly increment the achievement pace of ERP execution process. This is because of the way that the greater part of the ERP sellers are presently concentrating to creating nations to hold or even extend their piece of the overall industry, this was a perception made by Otieno (2008). This examination work gives an input from practical and unit heads who are viewed as key to effective usage of the ERP ventures.

To the supervisors of associations, this examination likewise made its commitment particularly as far as ERP venture the executives. One, the results of this exploration exhibits a notice to directors engaged with ERP framework execution. The examination explores the basic achievement factors that are basic in a situation of hierarchical change normally connected with usage of ERP frameworks. The outcomes present administrators

with the capacity to think of methodologies, assessment aides and measure prerequisites that offer them a superior probability of ERP execution achievement. To the sellers of ERP framework, the result of this exploration work is likewise basic as it empowers them to distinguish the troubles of executing ERP frameworks in creating nations and getting ready methodologies to survive and counter these obstructions. This is because of the way that the greater parts of the merchants are presently concentrating to the creating nations so as to hold their piece of the overall industry or even extend their productivity. The result of this investigation can likewise be helpful to other creating nations with comparable monetary and worlds of politics like Kenya particularly in the sub Saharan Africa where ERP usage is still not yet at cutting edge arrange.

#### *5.4 Recommendations*

Client fulfillment has been distinguished as a key driver to fruitful execution of any ERP framework. One of the key pointers of client fulfillment is preparing and instruction on the ERP framework. The analyst in this way prescribes both to the associations utilizing ERP frameworks and even those which might want to embrace to utilize ERP frameworks to constantly prepare their workers with the end goal that they may feel some portion of the task usage process. This was to spur them and even might be urge workers to offer answers for a portion of the difficulties which are being knowledgeable about the framework. Consistent preparing was likewise to guarantee that the representatives are enough outfitted with the expected aptitudes to deal with any difficulties which they might experience in the framework. Innovation is likewise rapidly changing consequently persistent preparing ends up basic to guarantee workers are constantly prepared for any new headways in innovation.

One of the difficulties confronted when gathering information was to get a database on the quantity of associations utilizing ERP frameworks in Kenya. It is along these lines prescribed that through the Information Communication and Technology Authority (ICTA) Board, the administration should have a far reaching information base where such data can without much of a stretch be gotten to by the analysts.

Another test the analyst experienced in his investigation was insufficient distributed work particularly in the sub Saharan Africa on this territory of study. Despite the fact that this might be credited to the way that the majority of the ERPs were created in the propelled economies, for example, Europe and United States of America, an ever increasing number of organizations in the creating nations are increasing and are giving progressively complex tasks which require ERP frameworks to deal with, it along these lines prescribed more research work to be distributed on this territory to empower researchers and specialists to prompt these associations in like manner.

### *5.5 Recommendations for further study*

This examination concentrated on the authoritative components which add to effective execution of ERP framework; be that as it may, as per Dezdar and Sulaiman (2009) these elements can be sorted into hierarchical, framework and venture, subsequently future investigations and specialists intrigued by this region of study can concentrate on elements identified with framework and task.

This investigation likewise utilized surveys to gather exact information subsequently it was unrealistic to look at real execution procedure of the ERP framework. Future research work may utilize interviews, center gathering dialog or even contextual investigations to have progressively intuitive sessions with the respondents.

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## **Appendix 2: Research Questionnaire (ICT PERSONNEL)**

You are requested to fill the question below as objectively as possible. By responding to this questionnaire, you are affirming your consent to participate in this research project. I want to assure that the responses you was give was remain completely confidential.

### **Part I: General Information**

Please put a tick mark [√] in the appropriate box where required

1. Your gender     Male     Female

2. Age.

18-25 years                    (       )

46-55 years                    (       )

26 - 35 years                    (       )

Above 55 years                    (       )

36 – 45 years                    (       )

3. Current responsibility?

DEAN

Head of Unit/section

Head of department

Head of ICT

4. How long have you held this position?

0-5 years     6-10 years     11-15 years                     over 15 years

5. What are your qualifications (Tick all that is applicable)?

Diploma     Bachelors' degree     Master's degree     PHD    [       ]    others    (specify)

### **Part II: ERP Implementation**

6. Which ERP system is your Organization using?     ORACLE                     SAP

7. For how long has the university used the ERP?

0-5 years     6-10 years                     11-15 years                     over 15 years





S/N		5	4	3	2	1
18.	End user training methods (such as on job or off job) and the number of trainings attended					
19.	End user training design (such as trainer of trainer approach) and the number of external trainings attended					
20.	Training of the end-user the usefulness of ERP system and signing of user acceptance forms					
21.	Training of the end-user the relevance of ERP system					
22.	Equipping of end users on system application / utilities					
23.	Training end users on software content					

### Effective Organizational Communication on the Implementation of ERP system

24. To what extent do the following organizational communication aspects influence the implementation of ERP system in your department? Use the scale provided below.

No Extent [1]

Large Extent [4]

Small Extent [2]

Very Large Extent [5]

Moderate Extent [3]

S/N		5	4	3	2	1
25.	The existing communication modes for the ERP project					
26.	Communication styles and the benefits of the new system to staff					
27.	Communication of the impact of the new system to staff current jobs roles					
28.	Effective and timely communication to all the stakeholders on the update of the project progress					
29.	Communication on the reasons for implementing ERP system,					
30.	Communication on the vision on how the business was change and participation in the selection system					
31.	Communication of how the system was support business changes					

**ERP Consultants on the Implementation of ERP system**

32. To what extent do the following ERP Consultants aspects influence the implementation of ERP system in your department? Use the scale provided below.

No Extent [1] Large Extent [4]  
 Small Extent [2] Very Large Extent [5]  
 Moderate Extent [3]

S/N		5	4	3	2	1
33.	Use of competent external consultants with industrial field knowledge to train users					
34.	Provision of support by knowledgeable vendor of the ERP package					
35.	Service response time of the software vendor					
36.	Qualified consultants with knowledgeability in both enterprises' business processes and information technology					
37.	Participation of vendor in ERP implementation					

**Appendix 3: Interview Schedules (HEADS OF DEPARTMENT/MANAGERS)**

1. Has the ERP system led to greater innovation in the host departments? If so, in what ways?
2. What challenges do you experience in the implementation of the ERP system at the University?
3. How was the communication changed between employees?
4. What were stakeholders' responses after an ERP implementation? (Positive, Neutral, Negative)
5. In what ways do the following aspects influence ERP implementation?
  - a) Top Management Support
  - b) End User Training
  - c) Effective Organizational Communication
  - d) ERP Consultants
6. What do you think should be done to counter the negative influences presented by each of the above mentioned, (If any)?

**Appendix 4: Work plan**

Phase	Activity	Months										Person in charge			
		1	2	3	4	5	6	7	8	9	10				
1	Proposal writing	█	--	█											Researcher
2	Development of Research Instruments			█	█										Researcher
3	Piloting					█									Researcher
4	Data collection						█	█							Researcher
5	Data Analysis								█	█					Researcher
6	Thesis writing								█	█	█	█			Researcher
7	Project presentation to supervisor									█	█	█	█		Researcher and Supervisor
8	Corrections and Final Submission												█		Researcher and Supervisor

**Appendix 5: Budget**

<b>Activity</b>	<b>Item</b>	<b>Item No</b>	<b>Total (Kshs)</b>
<b>Collection of secondary data</b>	Stationery	Assorted	5,000
	Internet	60	6,000
	Airtime		3,000
<b>Data Collection</b>	Stationery	2 Assorted	6,000
	Transport and related expenses		7000
	Research permit	1	2,000
	Airtime		1,000
<b>Project preparation</b>	Printing services	Drafts for Examination 1000 Pages	10,000
<b>Activity total</b>			<b>40,000</b>
<b>10% contingency</b>			<b>4000</b>

**Appendix 6: List of Universities in Meru County and Tharaka Nithi County**

- 1) Chuka University-Main Campus
- 2) Kenya Methodist University
- 3) Tharaka University College
- 4) Meru University of Science and Technology - Main Campus (Nchiru)
- 5) Meru University of Science and Technology - Town Campus
- 6) Kenya University - Egoji College Center - Meru
- 7) Nairobi University- Meru extramural center