Challenges of Implementing Enterprise Resource Planning in Mombasa International Airport

Paul Kamau Mungai
Student, Jomo Kenyatta University of Agriculture and Technology, Kenya
Dr. Fred Mugambi Mwirigi
Lecturer, Jomo Kenyatta University of Agriculture and Technology, Kenya

Abstract:
Enterprise resource planning system has been one of the most popular business management systems, providing benefits of real-time capabilities and seamless communication for business in large organizations. However, not all ERP implementations have been successful. Since ERP implementation affects entire organizations such as process, people, and culture, there are a number of challenges that companies may encounter in implementing ERP systems. Without proper infrastructure layout, change management, training and adequate stakeholder involvement, implementation of ERP will not have a lot of hindrance. Generally, the study focused on analyzing the challenges of implementing ERP in organizations with specific area being Moi International Airport. The general objective of the study was to examine the challenges of implementing enterprise resource planning, and the specific objectives of the study was the examine the effects on employee knowledge on implementing enterprise resource planning, to examine the effects of organizational resources on implementing enterprise resource planning, to examine the effects of stakeholder's involvement and to examine the effects of organizational culture on implementation of enterprise resource planning. A review of the literature was done so as to give information needed to show what exactly is being investigated. A conceptual framework clearly showing the variables from research objectives was used in the study. The target population was totaling to 1,353personnel from which sample size of 136 was randomly selected from the sampled departments. The researcher used stratified sampling from the sample population to achieve the desired representation from various divisions within MIA. Questionnaires, interviews and observations were used to gather the required information on the four variables being studied. Questionnaires and interviews were used to collect data in the study. Data was analyzed through statistical package tool called SPSS and findings presented through tables. On gender the majority of respondents were male. On education level, the majority of respondents have graduate degree. Majority of respondents have worked for between 6-10 years. Majority of respondents are aware of enterprise resource planning and the organization has embrace it to a fair extent. The preferred mode of training staff is through in-house workshops and the training to a fair degree focuses on enterprise resource planning. The top management commitments contribute to a fair extent on implementation of enterprise resource planning. On resources availability lack of resources such as finance technical skills and human resource affect greatly implementation of enterprise resource planning. Lack of stakeholder's involvement hampers implementation of enterprise resource planning and organizational culture as well hinders how enterprise resource planning can be achieved. The coefficient of determination was 52.9% and the Pearson coefficient of correlation between the dependent variable and independent variables was 0.135, 0.235, 0.575 and 0.575 for employee knowledge, organizational resources, stakeholder's involvement and organizational culture respectively. The study recommended that internet should be uninterrupted and that all corporations should embrace change management in order to achieve implementation of enterprise resource planning.

1. Introduction

1.1. Background of the Study

Enterprise resource planning is a cross functional enterprise system driven by an integrated suite of software modules that supports the basic internal business processes of a company (O'Brien, 2013). ERP gives a company an integrated real-time view of its core business processes such as production, order processing, and inventory management, tied together by ERP applications software and a common database maintained by a database management system. ERP systems track business resources (such as cash, raw materials, and production capacity) and the status of commitments made by the business (such as customer orders, purchase orders, and employee payroll), no matter which department (manufacturing, purchasing, sales, accounting, and so on) has entered the data into the system.

ERP facilitates information flow between all business functions inside the organization, and manages connections to outside stakeholders (O'Brien, 2013).

The systems allow companies to replace their existing information systems and also help to standardize the flow of management information and have been regarded as the next step in the evolution of MRPII. The MRPII model actually forms the basic core of ERP and uses similar modules, however some ERP systems do contain certain modules that were not originally used within MRPII such as computer aided design, distribution resource planning , tool management systems, and product data management (Prasad, Sharma, & Godla, 2013). ERP uses Internet technologies to integrate the flow of information from internal business functions as well as information from customers and suppliers. The system uses a relational database management system, within client/server network architecture, to capture valuable management data. The key principle behind the system involves entering the data from a series of modular applications only once. Once stored, the data automatically triggers the update of all related information within the system. The systems can support virtually all areas of an organization, across business units, departmental functions and plants (Prasad, Sharma, & Godla, 2013). Success of ERP implementations can be defined in two ways. Mombasa international airport has been working without the help of this useful system but thanks to the advancing technology.

Enterprise Resource Planning is a tool that enabled KAA to be more efficient. 'Eagle Edition' of Runway highlighted the benefits of the ERP system in the various departments within Kenya Airports Authority to enlighten all members of staff on the advantages and benefits of the ERP system. There would be improved efficiency information integration for better decision making, better corporate image, improved customer goodwill, customer satisfaction and so on. It is important to note that the implementation of ERP takes time and generates great changes in the way business is conducted and although the benefits may not be seen immediately they are indeed worth waiting for.

According to (Plotkin, 2014) the ultimate measure of success for an ERP implementation is the value that the system adds to the organization. However, before this ultimate success can be achieved, the ERP system has to be operational. Therefore, another definition of ERP implementation success is the satisfaction of the initial project requirements for going live, such as meeting deadlines, staying within budget and achieving system performance as expected (Robert & Elliot, 2011)

1.1.1. Kenya Aviation Industry
The Kenya Airports Authority is an autonomous body established in 1991 through an act of parliament and is charged with an umbrella responsibility of providing and managing a coordinated system of airports in the country. Prior to its formation, the former erstwhile Aerodromes Department under the Ministry of Transport and Communication handled this responsibility. Erstwhile was in charge of then Nairobi's Old Embakasi Airport which was constructed in the mid-1950 to serve the first generation Boeing 707/DC8 aircraft; Nairobi Embakasi Airport was opened in May 1958, by the last colonial Governor of Kenya, Sir Evelyn Baring, although the airport was due to be opened by Queen Elizabeth, The Queen Mother was delayed in Australia and could not make the ceremony. Nairobi Embakasi Airport was then closed on March 14, 1978 and paved way to the current Jomo Kenyatta International Airport.

Contrary to beliefs, Nairobi Airport was not the first airport in Kenya. Wilson Airport, which is one of the regions busiest domestic aerodrome traces its roots back to the First World War Commercial routes were pioneered by Imperial Airways and its successor BOAC in the 1920's and in July 1929, Wilson Airways Ltd was formed by Mrs. Florrie Wilson to operate from an airfield in Nairobi, at Dagoretti Corner. Later, that year the airfield at Dagoretti Corner was abandoned in favour of the present site of WAP, originally called Nairobi Aerodrome.

Out of the Second World War emerged Mombasa and Kisumu airports which were developed mainly for military use. Mombasa had two runways, a short one supported by a along one which stretched 1.5 km, capable of serving DC and similar aircrafts, while Kisumu was set up strategically to support amphibian type of aircraft landing in the neighboring Lake Victoria, the airports have since been upgraded to international status. In its brief period of existence, Kenya Airports Authority has undergone tremendous structural changes intended to make the organization a result driven and customer focused establishment. Currently, the Authority is undertaking major projects to improve existing aerodromes in the country as well as build new ones to cater for growth in key sectors of the economy such as tourism, horticulture, and trade.

1.2. Statement of the Problem
Enterprise resource planning (ERP) system is a business management system that comprises integrated sets of comprehensive software, which can be used, when successfully implemented, to manage and integrate all the business functions within an organization. These sets usually include a set of mature business applications and tools for financial and cost accounting, sales and distribution, materials management, human resource, production planning and computer integrated manufacturing, supply chain, and customer information (Boykin, 2012). These packages have the ability to facilitate the flow of information between all supply chain processes (internal and external) in an organization(Al-Mashari, Al-Mudimigh, & Zairi, 2013).Furthermore, an ERP system can be used as a tool to help improve the performance level of a supply chain network by helping to reduce cycle times (Gardiner, Hanna, & Latour, 2012).

Although ERP systems have certain advantages such as low operating cost and improving customer service, they have some disadvantages due to the tight integration of application modules and data. Huge storage needs, networking requirements and training overheads are frequently mentioned ERP problems. However, the scale of business process re-engineering (BPR) and customization tasks involved in the software implementation process are the major reasons for ERP dissatisfaction. Baan, PeopleSoft, as well as SAP calculate that customers spend between three and seven times more money on ERP implementation and associated services compared

to the purchase of the software license (Scheer & Habermann, 2013). This means that ERP projects are large, costly and difficult and that they require large investment in capital, staff and management time (Adam, Sammon, & Carton, 2012). Yen *et al*. (2012) identified the following disadvantages of ERP: its high cost prevents small businesses from setting up an ERP system, the privacy concern within an ERP system and lack of trained people may affect ERP's efficiency. Implementation of an ERP project is painful, and customization is costly and time-consuming.

Many ERP implementations have been classified as failures because they did not achieve predetermined corporate goals. Vincent(2002), on enterprise resource planning; managing the implementation process in USA examined that Implementing an ERP system is generally a formidable challenge, with a typical ERP implementation taking anywhere from one to five years. The story of the success of ERP systems in achieving the stated objectives is mixed. Some companies have had very successful implementations while others have struggled. While the issue of ERP implementation is sparse the need to explore it in MIA is paramount. The aim of this study was to answer this research question: What are the challenges of implementing Enterprise Resource Planning at Mombasa International Airport?

1.3. Objectives
These study was guided by both and general and specific objectives.

1.3.1. General Objective
To exams the challenges of implementing enterprise resource planning at Mombasa international airport

1.3.2. Specific Objectives
  i. To evaluate the effect of employee knowledge on implementation of enterprise resource planning systems in Mombasa International Airport.
  ii. To establish the effect of availability of resources in implementation of enterprise resource planning systems in Mombasa International Airport.
  iii. To evaluate the effect of stakeholder involvement on implementation of enterprise resource planning systems in Mombasa International Airport.
  iv. To determine whether Organizational Culture affects implementation of enterprise resource planning systems in Mombasa International Airport.

1.4. Research Questions
  i. How does employees' knowledge and training affect implementation of enterprise resource planning systems in Mombasa International Airport?
  ii. How does resources availability affect implementation of enterprise resource planning systems in Mombasa International Airport?
  iii. How does stakeholder's involvement affect implementation of enterprise resource planning systems in Mombasa International Airport?
  iv. How does organizational Culture affect implementation of enterprise resource planning systems in Mombasa International Airport?

1.5. Importance of the Study
The findings of this research were expected to contribute towards ERP implementation practice. Management at Mombasa international airport after implementation were in a better position to know the real challenge of implementing ERP project. Therefore management was be able improve productivity by averting these challenge. For example, supplier and other companies working as MIA stakeholders who contemplate entering foreign markets can use the findings so as to better understanding of global ERP markets and develop better strategy.ERP implementing firm can also recognize the environmental and internal requirements and prepare accordingly. Given the complexity and integrated nature of ERP and large investment involved is imperative for organization to study the experiences of others, and learn from their practices and success factors.

In this light, organization planning to implement ERP in Kenya can learn from the successes and failures of the case study organization and therefore, avoid pitfalls which can lead to ERP project failures. Based on the findings of this research, the intent was to come up with a set of systematic steps (implementation guideline) and a methodology for helping managers, implementers and organization adapt to the demands of the environment. The study was a source of reference material for future researchers on other related topics; it may also help other academicians who undertake the same topic in their studies. The study also highlighted other important relationships that require further research. The scholars and researchers who would like to debate or carry out more studies on ERP may find this study useful. The whole research project was a prerequisite towards enabling the researcher get an award of Masters Degree in Project Management.

1.6. Scope of the Study
The research focused on an initiative taken by management of Kenya Airports Authority to establish an integrative ERP SAP system at Mombasa international airport. It was conducted at Moi international airport located at the county of Mombasa. ERP project

implementation comprised of the Project Steering Committee which collectively articulate the strategic direction for the resource integration initiative and manage project activities through the PMO, which is comprised of stakeholder representatives. MIA has 1100 users that the study focused on. Questionnaires thereafter were circulated to samples of selected ERP SAP users. The data gathered from the questioners were therefore used for analysis. A conclusion was arrived at after data analysis to clearly show whether there are challenge of ERP projects implementation.

2. Literature Review

2.1. Introduction
This chapter summarizes the information from other researchers who have carried out their research in the same field of study. The specific areas covered here are theoretical and empirical review and the conceptual framework. It identifies the factors that drive businesses towards successful implementation of growth strategies such strategies include enterprises resource planning systems.

2.2. Theoretical Review
Theoretical literature provided a framework in which the theories relevant to the study were based on. The theories that were of relevance to the study were the change theory and agency theory. Each of them was believed to provide a framework on the challenges of implementing enterprise resource planning in Mombasa International Airport.

2.2.1. Change Theory as a factor ERP Implementation
Since the ERP implementation involves changing the business processes of companies that implement such software, change theory may prove useful in explaining the outcomes of our case studies. Business process change (BPC) is defined as organizational initiative to design business processes to achieve significant (breakthrough) improvement in performance (e.g. quality, responsiveness, cost, flexibility, satisfaction, shareholder value, and other critical process measures) through changes in the relationships between management, information technology, organizational structure, and people.

These initiatives may differ in scope from process improvement to radical new process designs depending on the degree of change undertaken in each organizational subsystem and their interactions. Thus, in any examination of BPC outcomes, consideration should be given to the environmental conditions for change and the ability of the organization to manage change in these conditions (Kettinger, 2014).

(Kettinger, 2014) and Grover (2015) have proposed a model that considers both these aspects of BPC management. According to their model, any significant business process change requires a strategic initiative where top managers act as leaders in defining and communicating a vision of change. The organizational environment, with a ready culture, a willingness to share knowledge, balanced network relationships, and a capacity to learn, should facilitate the implementation of prescribed process management and change management practices.

Process and change management practices, along with the change environment, contribute to better business processes and help in securing improved quality of work life, both of which are requisite for customer success and ultimately, in achieving measurable and sustainable competitive performance gains. This study was informed by the change theory which is one of the most heavily referenced in technological implementation. Many authors have attempted to address how and why changes occur, but the pioneer is, perhaps Kurt Lewin.(Lewin, 2014) identified three stages through which change agents must proceed before change becomes part of a system these include: Unfreezing (when change is needed). Moving (when change is initiated).Refreezing (when equilibrium is established). He also discussed how certain forces can affect change, which he called force-field analysis. Lewins work was expanded and modified by (Rogers, 2013), who described five phases of planned change as: awareness, interest, evaluation, trial and adoption.

2.2.2. Agency Theory
Basic agency paradigm was developed in the economics literature during 1960s and 1970s in order to determine the optimal amount of the risk-sharing among different individuals. However, gradually the domain of the agency theory was extended to the management area for determining the cooperation between various people with different goals in the organization, and attainment of the goal congruency (Baiman, 2011).

Agency theory relates to situations in which one individual (called the agent) is engaged by another individual (called the principal) to act on his/her behalf based upon a designated fee schedule. Since both individuals are assumed to maximize utility, and are motivated by pecuniary and non-pecuniary items; incentive problems may arise, particularly under the condition of uncertainty and informational asymmetry. That is, the objective function of the principal and the agent may be incompatible, and therefore, the agent may take actions which will jeopardize the principal's benefits. In addition, an agency operates under the condition of risk and uncertainty. In effect, the basic agency theory usually assumes that both individuals are risk averse. Under this circumstances, the amount and content of the produced accounting information and other information sources would become a significant issue in risk sharing and controlling the agent's actions (Baiman, 2011).

2.3. Conceptual Framework

In this study, the researcher conceptualized the interaction of the variables as indicated in the figure below.
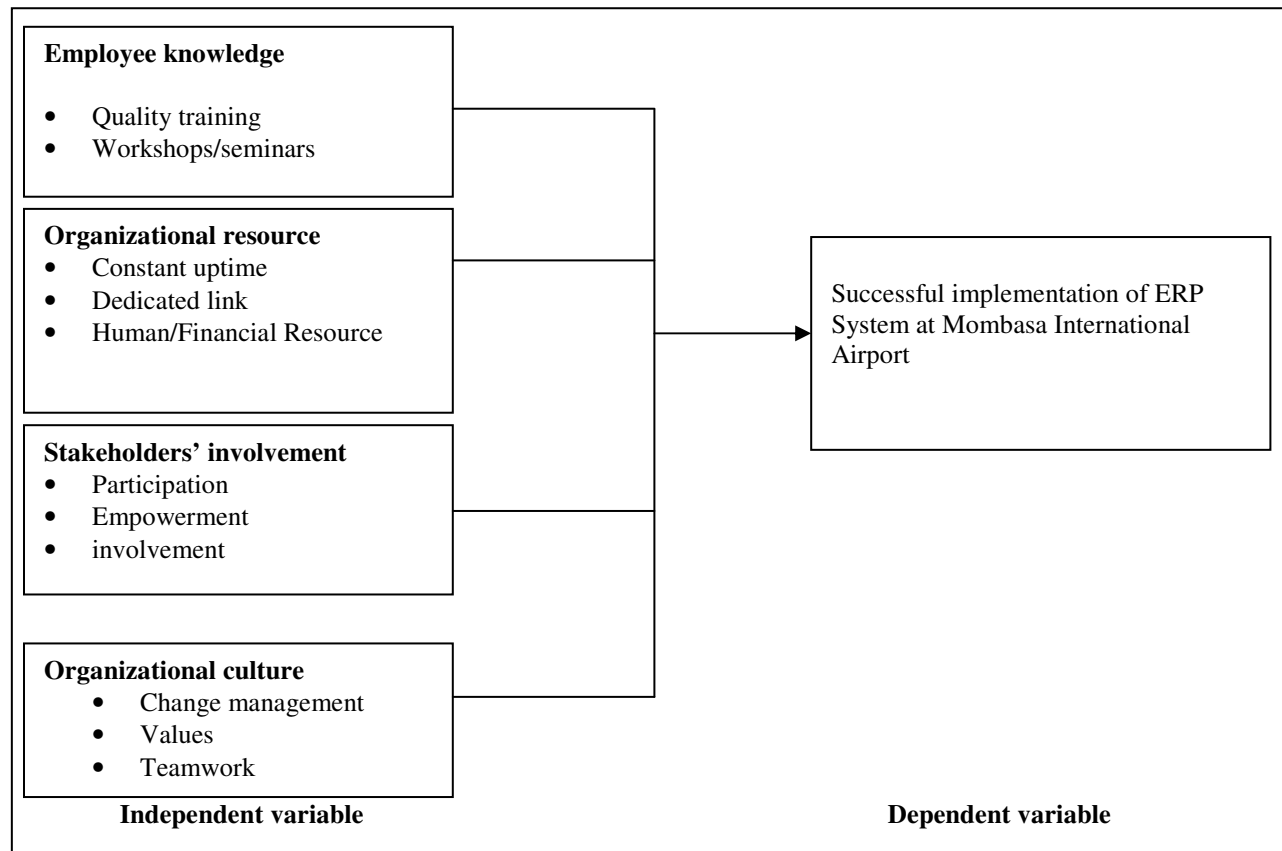

Figure 1: Conceptual Framework

2.3.1. Employee Knowledge

Successful ERP implementation is highly affected by the way team members are selected and managed. Employee should be experienced in various techniques such as strategic visioning, change management as well as technical knowledge. People with job experience should be included in bringing new ideas in ERPimplementation efforts. Limited expertise in IT generally tends to result in lesser user involvement and participation (Akkermans & Helden, 2014). Peculiarities of technical equipment and software as well as organizational and human resources stretch ERP implementation projects and make them unquestionably complex as well as requiring new project management abilities. The complexity of ERP implementation projects particularly requires extensive methodical planning and weighted management. The knowledge, workmanship, abilities and proficiency of a project manager are viewed as the key factors determining the success of ERP implementation or its failure. Training of prospective users how to use a system and education of users relating to new business processes is a vital implementation activity(Akkermans & Helden, 2014).

The absence of user training and lack of understanding as to how an enterprise resource planning system is going to change an organization's business processes are often referred to as a problem resulting in a failed implementation of ERP systems. Education and training stand for a process in the course of which executives and employees are familiarized with the logic and idea of enterprise resource planning systems. Education helps all employees to develop a better understanding of how their work is related to other functional areas of a company. Companies are advised to train each user to use a system by explaining how his work relates to certain business processes and how his work is going to be affected by the new system. The decision of adopting an ERP system depends on the company, while the usage and effort invested in learning the system rely on employees (Akkermans & Helden, 2014).

While training increases the ability to use an information system (IS) application, training programs are always provided before IS application implementation. Training prior to implementation is important, yet powerful and integrated IT applications force users to continue learning new skills. Lack of continuous IT learning will cause a gap between how IT is actually used and the realization of its full potential. Post implementation learning is continuous learning after an IS system has gone live. He also suggests that post-implementation learning is the key to realizing IT s full potential. The more users continue to learn, the more effectively IT is used and the greater its impact on work.

Employee knowledge is one of the most significant factors determining a successful implementation of enterprise resource planning systems in an organization. The majority of research works have placed a particular emphasis on top management support as prerequisite for a successful implementation of ERP systems. The mission of top management is to create a favorable environment for

the implementation of ERP systems and attaining of desired results. Top executives must not only be observers, but also be participants of the implementation process of ERP systems. The role of top management in implementation of enterprise resource planning systems covers formulation of real and justified goals based on the awareness of the opportunities and limitations provided by Information technology (Albano, Pino, & Borges, 2014).

2.3.2. Organizational Resource
This refers to all the resources required for a project such as financial/human resources, time, and proficiency (quality facilities), Hardware resources, human resources etc. Resource allocation involves the planning of all the resources required for the project management. It helps manager to utilize only those resources which are required efficiently and effectively. Some elements of human change management are described as the more difficult challenge. He further explains how ERPrepresents a danger to people when it introduces new job structures and definitions, and forces employees to change their work style. They recognize the importance of the human resource when they state companies are not asset portfolios, but people working together to invent sell and provide service however, they fail to stakeholders(Blair, 2011).
To complete successfully in this environment, organizations continually need to improve their performance by reducing cost, innovating products and processes and improving quality, productivity and speed to market. Strategic management is an ongoing process that evaluates and controls the business and the industries. The company assesses its competitors and set goals and strategies to meet all existing and potential competitors. It then reassesses each strategy to determine how it has been implemented and whether it has succeeded or needs replacement by a new strategy to meet changed circumstances(Rasmiy & Tharwat, 2015).
Successful implementation of system takes more time than its formulation. This can challenge managers" attention to execution details: Along framework can detract managers" attention from strategic goals. Controls must be set to provide feedback and keep management abreast of external shocks and changes. The process of execution must be dynamic and adaptive, responding to unanticipated events. Lack of uptime of the system as a resource is generally a bigger threat to for successful ERP Implementation. They observed this failing in both fast-growth, new companies that feel understaffed due to growth demands and companies under heavy competitive pressure "who felt they could not spare resources to drive strategic innovation(Borges, 2011).

2.3.3. Stakeholders' Involvement
User involvement and participation refers to the behaviors and activities that users perform in the system implementation process. It refers to a psychological state of the individual and is defined as the importance and personal relevance of a system to a user. Research has shown that implementations are far more likely to achieve their goals when users are given the proper training to master the new solution at the start of the implementation. Involving stakeholders in decision-making processes is not confined corporate social responsibility (CSR) processes (Boonstra, 2014).
It's a tool used by mature private and public sector organizations, especially when they want to develop understanding and agree to solutions on complex issues or issues of concern (Boonstra, 2014).Companies engage their stakeholders in dialogue to find out what social and environmental issues matter most to them about their performance in order to improve decision-making and accountability. Engaging stakeholders is a requirement of the Global Reporting Initiative, a network-based organization with sustainability reporting framework that is widely used around the world.
The International Organization for Standardization (IOS) requires stakeholder engagement for all their new standards. An underlying principle of stakeholder engagement is that stakeholders have the chance to influence the decision-making process. This differentiates stakeholder engagement from communications processes that seek to issue a message or influence groups to agree with a decision that is already made. The Environment Council developed the Principles of Authentic Engagement. These are intended to provide a framework for genuine stakeholder engagement (Boonstra, 2014).

2.3.4. Organizational Culture
(Ojo, 2010) defined organizational culture as the values and behaviors that contribute to the unique social and psychological environment of an organization. He perceives organization culture as a set of values that help organizational members know what is acceptable and that which is unacceptable within the organization. It is therefore based on shared attitudes, beliefs, customs, and written and unwritten rules that have been developed overtime and are considered valid. Implementation of ERPis influenced a lot by culture because culture affects not only human relationships at the work place but also their attitude towards change which in itself is the central theme of ERP.
Some scholars have suggested that in order to effectively implement ERP, organizational culture must be changed. Positive corporate culture is crucial to attaining a high-performance culture, assimilation in value-chain activities and business strategies (Armstrong, 2013).In 1990s, globalization led to immense competition and companies; especially in the manufacturing sector therefore firms had to realize the need for more customer focus and shortened product lifecycles.
Corporations had to move towards agile manufacturing, continuous improvement of business processes and business process reengineering. This led to the evolution of ERP systems. Once an enterprise wide implementation is in place, operating managers are relieved of routine decisions and they thus have the time to plan and execute long-term decisions that are vital for the growth of an organization (Sadagopan, 2014).

2.4. Critique of the Existing Literature

2.4.1. Communication Plan

Strong communication within the entire organization during the implementation process increases success for ERP implementation. It allows the organization's stakeholders to understand the goal and the expected benefits of the project as well as to share the progress of the project. An "open information policy" protects the various communication failures for the project. While the critical success factors can lead to success of ERP implementation, they do not guarantee it, however the delivery of the critical success factors is one major condition to lead to benefits from ERP implementation (Al-Mashari, Al-Mudimigh, & Zairi, 2013).

IT projects can be considered successful as according to the following terms:

    i. Correspondence success, which occurs when there is a match between IT systems and the specific planned objectives.
    ii. Process success, which occurs when IT project is completed within time and budget.
    iii. Interaction success, which occurs when user's attitudes towards IT are positive.
    iv. Expectation success, which occurs when IT systems match user's expectations.

The taxonomy interplay between core business strategy aspects in the ERP implementation and explains how the role of IT and associated systems can play in supporting the effective deployment.

2.4.2. Change Management

Acceptance of change brought about by the implementation of ERP system is considered as the most cited key issue towards successful implementation. The concept of change management is the implementation team to be ready with change management program (Nah & Michelle, 2014). As part of change management program the users must be engaged in design and business process implementation and ERP, further to this end user training must be provided to help them (Bingi, Sharma, & Godla, 2014). Employees must be given proper training to let them understand the concept and how the system will change the business process.

Change management is a primary concern of many organizations involved in ERP project implementation. Many ERP implementations fail to achieve expected benefits, possibly because companies underestimate the efforts involved in change management. Identify organizational change is the body of knowledge that is used to ensure that a complex change, like that associated with a new big information system, gets the right results, in the right timeframe, at the right costs. Generally, one of the main obstacles facing ERP implementation is resistance to change (Al-Mashari, Al-Mudimigh, & Zairi, 2013).

2.5. Summary

In order to remain competitive in the market, organizations have been implementing various ERP systems. ERP Implementation is a process that strives to increase customer satisfaction, lower costs, and minimize defects and variations in every aspect and every process of the business. Basically, the philosophy of ERP systems is to involve every employee in the organization along with its suppliers and distributors to improve efficiency and enhance customer satisfaction.

This article focused on the challenges of implementing ERP in MIA. Employee knowledge, Organizational resource, Stakeholders' involvement, Organizational culture were the key elements in the research and could improve the success of ERP if fully looked into. Many companies have ventured into a participative style of management by involving employees in the problem solving and decision making processes. Above all, it is vital for the management to remain continuously committed to the cause of employee knowledge and stakeholder involvement.

2.6. Research Gaps

In many instances within the organizations, senior management always blames employees when performance falls. However, it is very important to analyze why gap exists between expected performance and actual performance to determine if there is a cause other than inadequate employee efforts. The gaps not are:

2.6.1. System Reliability

Reliability is the capability of the software to maintain its level of performance under stated conditions for a stated period of time. Reliability has four sub-characteristics; maturity, fault tolerance, recoverability, and reliability compliance. System or process-reliability causes can relate to any process within an organization that becomes a roadblock to an employee meeting performance expectations. If there is a constant downtime within the system and the system runs on modern infrastructure then performance will be reduced. In terms of ERP systems, the reliability refers to the capability of the systems to maintain its service provision under specific conditions for a specific period of time. In other words, the probability of the ERP system fails in a problem within a given period of time (Fahmy, Haslinda, Roslina, & Fariha).

2.6.2. System Portability

Portability of software refers to the capability of the software to be transferred from one environment to one another. Therefore, the ERP systems in the higher education institutions should be applied using different operating systems; be applied at different organizations or departments; and be applied using a variety of hardware. Similar to the previous quality characteristics, portability has set of sub-characteristics namely adaptability, install ability, coexistence, replace ability, and portability compliance (Fahmy, Haslinda, Roslina, & Fariha).

<u>2.6.3. Personnel</u>

These are gaps that are within the employee's realm of control. They can for example, deal with situations that are going on in home life that affect work performance or depend on the employee's physical or emotional abilities. Lack of effort, motivation, or concern for the agency's efficiency can also fall under this category. If an employee alleges that a medical condition is the cause of poor performance, contact your human resource officer or legal counsel at once. Do not attempt to resolve employees' personal problems (Scoltes, 2010).

When an organization carefully eliminates these above mentioned gaps, it can be sure of the whole business model to be effective with value added processes, methods, systems and efficient resources contributing for continual improvements and towards business excellence. The cause of a performance gap may overlap a couple of categories. It is imperative that the management and employees communicate to identify the cause of the gaps and arrive at solutions to eliminate or minimize the gaps to improve on the quality systems in the organization (Goetsch & Davis, 2013).

3. Research Methodology

3.1. Introduction

This chapter gave a description of the methods used in carrying out the study.

3.2. Research Design

This study employed a descriptive research design which involved analyzing the outcome. This involved collecting data in order to answer questions concerning the current status of the subject of study. It involved collecting data through questionnaires, interview and analyzing it in order to obtain the required data. This was be used for testing of hypotheses to test the dependent variable with independent variables in order to know the relationship between them. This design determined and reported the way things were i.e. it attempted to describe such things as possible behaviour, attitudes, values and characteristics, (Mugenda & Mugenda, 2009).

The use of descriptive study in this study enabled the researcher to use structured questionnaires to find out facts without manipulation of data, sought opinions, describe, and analyze the challenges of implementing ERP system at MIA.

3.3. Target Population

According to (Polit, 2013) population is the aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study the population was all MIA users who directly interacted with ERP systems being implemented. The target population to be investigated span to all departments at MIA so as to adequately cover the total population. There was a total of 1100 employees spanning in 10 departments. It is from the sample frame that the researcher sampled the sample size.

3.4. Sample and Sampling Procedure

A sample is a finite part of a population whose properties are studied to gain information about the whole (Orodho & Kombo, 2012). In order the researcher to conduct a comprehensive research, the researcher required the input of members from each department. According to (Kalton, 2013), the principle objective for any sampling is to secure a sample, which subject to limitation of size, reproduce the characteristics of the population. This is then followed by random selection of subjects from each stratum. The population is first divided into mutually exclusive groups that are relevant and appropriate and meaningful in the context of the study (Mbwesa, 2014).

The researcher used Stratified Sampling. This method involves a process of stratification and segregation of the population in homogenous groups. The organizations population was be divided into two stratum i.e. operations and business development. Each stratum had some departments that were used to populate the sample size. From the population size, a simple random sampling method was employed in all departments within the stratum to populate the sample size. These departments were; 1. Operations: Security, Fire, Ground Flight safety, Customer care, Engineering. 2. Business development: Human Resource Procurement, Information and communication Technology, Finance, Marketing, Procurement. The actual sample size was 124. This was arrived at after using ten (10%) of each stratum. The actual respondents were selected randomly from each population sub-group as indicated in Table 1 below.

3.5. Sample Frame and Sample Size

Department	Sample Frame	Percentage 10%	Sample Size
Procurement	93	10	10
Information Technology	50	10	5
Human Resource	70	10	7
Engineering	120	10	12
Security	330	10	33
Finance	50	10	5
Fire	240	10	24
Customer care	160	10	16
Marketing	90	10	9
Ground Flight safety	150	10	15
TOTAL	**1,353**	**10**	**136**

Table 1: Sampling Frame

3.6. Data Collection Instrument
In order for the relevant information to be collected, the researcher used questionnaires and interviews. According to(Mbwesa, 2014), if combination of both open-ended and closed ended questions are used in the questionnaire, it is possible to find out how many people experience the challenge that exist in implementing Enterprise Resource Planning and what their view is generally in the system. They are relatively easy to administer and relatively easy to analyze. A five-point Likert scale was employed with a score of 1-5 indicating "strongly agree" to "strongly disagree" to represent different attitude of respondents. These questionnaires had items seeking information on the four variables being studied i.e. Employee knowledge, Organizational resource, Stakeholders' involvement, Organizational culture. Interviews were also conducted and mainly targeted business development strata as stated during sampling. This stratum was composed of office hour officers particularly managers and low level managers and face-to-face contact was necessary to them.

3.7. Pilot Testing
The questionnaires were pilot tested before the actual data collection. This involved a few respondents from MIA to ascertain its effectiveness. The researcher was interested in testing the reliability of the research instruments, the questionnaire hence validity of data collected. Validity is the accuracy and meaningfulness of inferences which are based on the research results (Mugenda & Mugenda, 2009)asserts that reliability is done using Cronbach's Alpha Model on SPSS. (Mugenda & Mugenda, 2006)assert that reliability is the measure of the degree to which research instrument yields consistent results or data after repeated trials. The researcher did a pilot with 10 % of respondents before distributing the questionnaire. The researcher used 14 respondents for the pilot process. The purpose was to ensure that those items in the questionnaire are clearly stated and have the same meaning to all respondents. At the same time it helped to determine how much time is required to administer the questionnaire. Respondents for pre-testing were not form part of the sample.

3.8. Data collection Procedure
The questionnaires were self-administered through drop and pick later method. To enhance response rate the researcher conducted several phone calls to remind the respondents on the need to fill the questionnaires. Before administering questionnaire, the researcher briefed the respondent of their privacy and let them know that no information would be disclosed whatsoever. It is considered unethical to collect information without the knowledge of the participant, and their expressed willingness and informed consent. The researcher therefore obtained an introductory letter from the university, which was used to seek permission from KAA MIAto collect information from the staff. The researcher administered the instruments personally and collected data for analysis.

3.9. Data Analysis and Presentation
After collecting the raw data, the researcher carried out field editing before the final office editing. Advances in technology simplified this process and the researcher used the Statistical Package for Social Sciences (Version 22) software for this purpose. The researcher analyzed data through descriptive statistics in order to have the distribution of scores using statistics.Set of data was described using percentage, mean standard deviation and coefficient of variation and presented using tables, charts and graphs. (Fraenkel & Wallen, 2011) argue that regression is the working out of a statistical relationship between one or more variables. The researcher will use a multiple regression analysis to show the effect and influence of the independent variables on the dependent variables.
The relationship is as follows;
$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4$
α = Constant
$\beta_1, \beta_2, \beta_3, \beta_4$ = Partial regression coefficient
X_1 = Employee Knowledge
X_2 = Organizational Resource

X_3 = Stakeholders' involvement
X_4 = Organizational Culture

4. Data Analysis, Results and Discussion

4.1. Introduction
This chapter presents analysis of the data on the challenges of implementing enterprise resource planning in Mombasa International Airport in Mombasa, Kenya. The chapter also provides the major findings and results of the study and discusses those findings and results against the literature reviewed and study objectives. The data is mainly presented in frequency tables, means and standard deviation.

4.2. Response Rate
The study targeted 136 employees of Mombasa International Airport in Mombasa County, Kenya. From the study, 93 out of the 136 sample respondents filled-in and returned the questionnaires making a response rate of 68.38% as per Table 2 below.

	Frequency	Percentage
Respondent	93	68.38
Non-respondent	43	31.62
Total	**136**	**100**

Table 2: Questionnaire Return rate

According to Mugenda and Mugenda (2003) a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent; therefore, this response rate was adequate for analysis and reporting.

4.3. Data Validity
The researcher asked experts, three academicians, to assess the scales' content validity. Accordingly, the researcher made changes on the first draft in terms of eliminating, adding or rewording some of the items included in that draft**.**

4.3.1. Reliability Coefficient
Prior to the actual study, the researcher carried out a pilot study to pre-test the validity and reliability of data collected using the questionnaire. The pilot study allowed for pre-testing of the research instrument. The results on reliability of the research instruments are presented in Table 3 below.

Scale	Cronbach's Alpha	Number of Items
Employee Knowledge	0.714	9
Organizational Resources	0.809	8
Stakeholders Involvement	0.723	8
Organizational Culture	0.777	8

Table 3: Reliability Coefficients

The overall Cronbach's alpha for the four categories which is 0.798. The findings of the pilot study shows that all the four scales were reliable as their reliability values exceeded the prescribed threshold of 0.7 (Mugenda & Mugenda, 2009).

4.4. Demographics Information
The background information gathered was based on gender, level of education, work experience and enterprise resource planning awareness.

4.4.1. Gender
The study sought to establish the gender of respondents. The study results revealed that 63.4% of the respondents were male and 36.6% were female with a mean score of 1.37 and a standard deviation of 0.484. This shows that majority of respondents were male as shown in Figure 2 below.
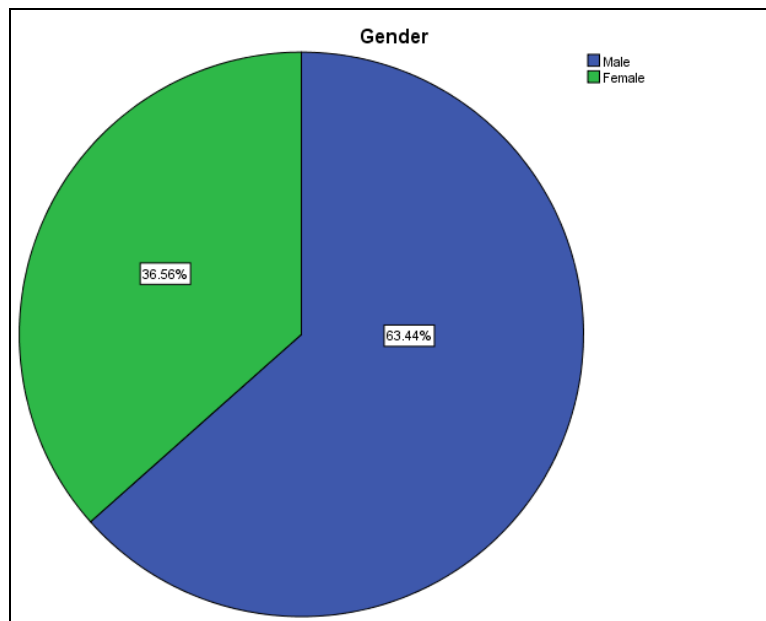
Figure 2: Gender

4.4.2. Level of Education

The study sought to establish the education level of respondents. The study results revealed that 25.8% have tertiary level of education, 41.9% graduates, 25.8% post graduate diploma and respondents with MA/MSC/MBA were 6.5% with a mean score of 2.13 and a standard deviation of 0.875. This shows that majority of respondents who participated in the study were graduates as shown in Figure 3 below.
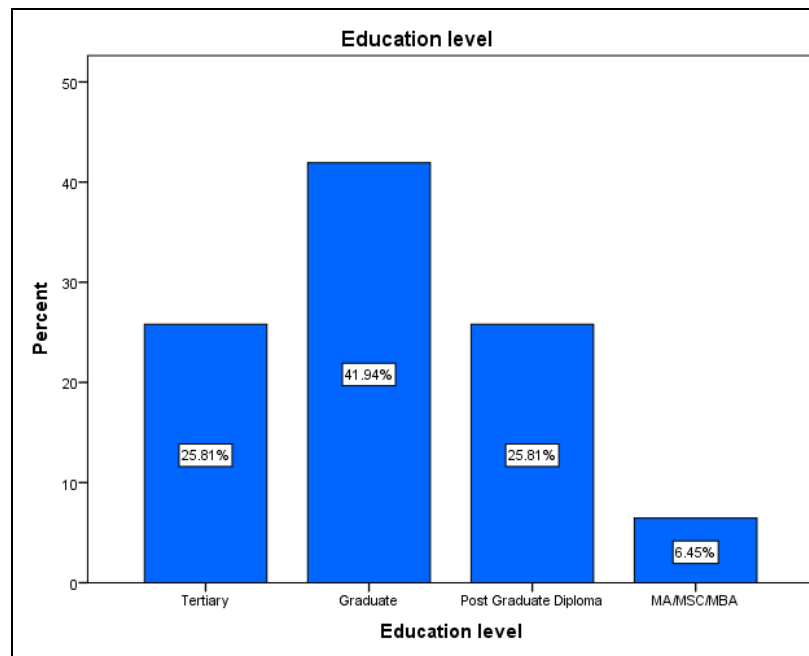

Figure 3: Level of Education

4.4.3. Working Experience

The study sought to establish the working experience of respondents. The study results revealed that 16.1% of the respondents have worked for less than 1 year, between 1-5 years were 18.3%, between 6-10 years were 48.4% and between 11-15 years were 17.2% with a mean score of 2.67 and a standard deviation of 0.948. This results show that majority of respondents have worked for between 6-10 years as shown in Figure 4 below.

Figure 4: Work Experience

4.4.4. Enterprise Resource Planning Awareness
The study sought to establish the level of awareness of respondents. The study results revealed that 23.7% are highly aware of enterprise resource planning, 54.8% are fairly aware and 21.5% are not aware at all with a mean score of 1.98 and a standard deviation of 0.675. This shows that majority of respondents are fairly aware of ERP as shown in Figure 5 below.
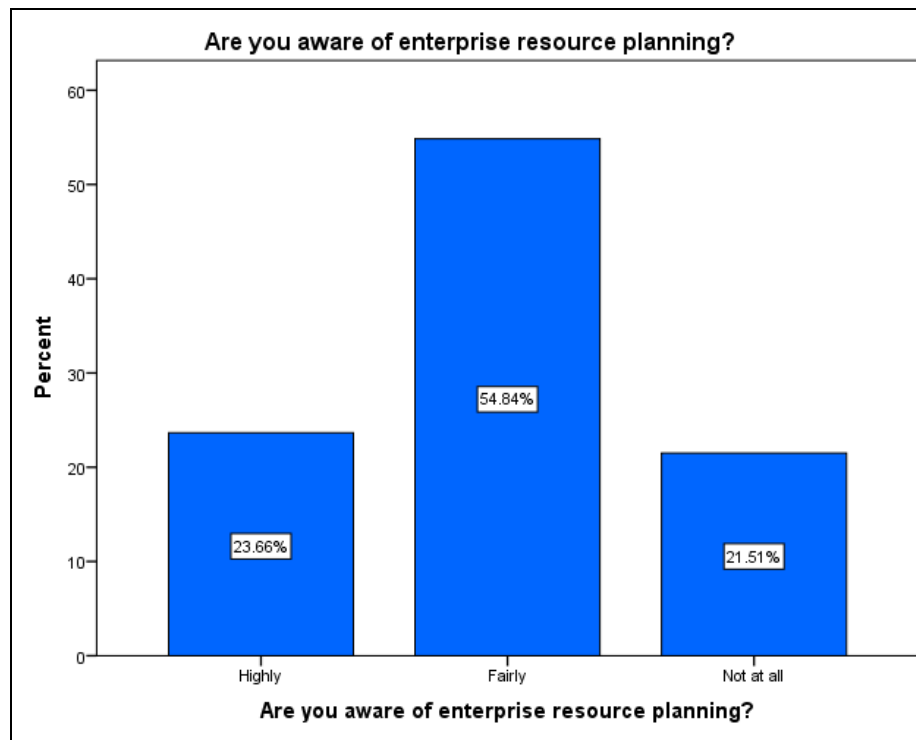
Figure 5: Level of Awareness of enterprise resource planning

The study sought to establish whether the respondent considers the organization as having had embraced enterprise resource planning. The study results revealed that 23.7% have embraced ERP to a high degree and 63.4% have embraced ERP to a fair degree and 12.9% have embraced ERP to a low degree with a mean score of 1.89 and a standard deviation 0.598. This shows that majority of respondents consider the organization has embraced ERP to a fair degree as shown in Figure 6 below.
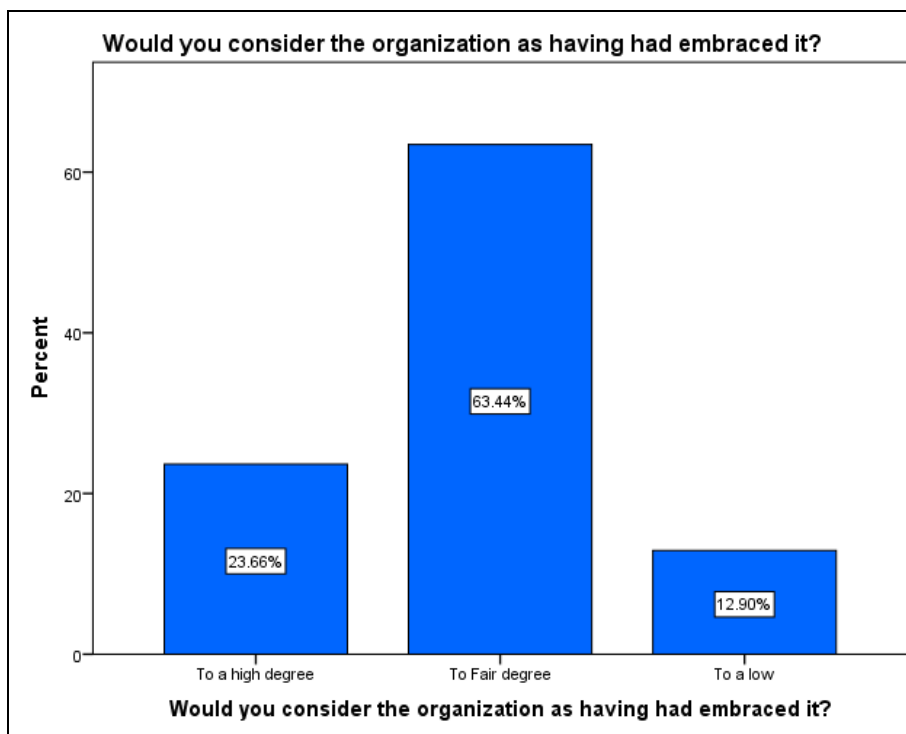
Figure 6: Consideration whether organization has embraced ERP

4.5. Employee Knowledge
The study sought to establish what programs have been put in place by the organization for employee training. The study results revealed that 44.1% have in-house workshops, 33.3% continuous training and 22.6% personal initiatives with a mean score of 1.78 and a standard deviation of 0.792. This shows that preferred mode of employee training was in-house workshops as shown Figure 7 below.
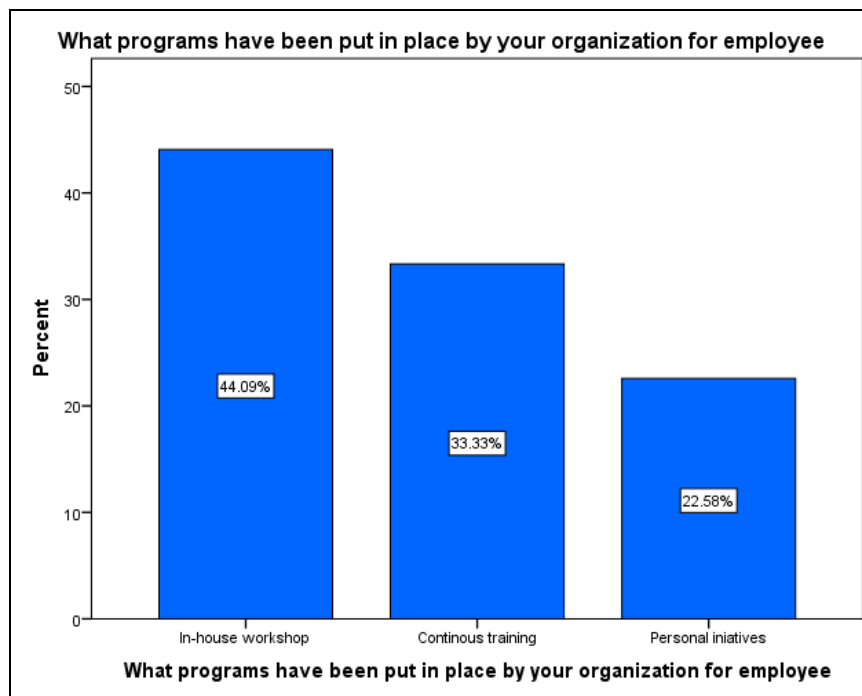

Figure 7: programs for employee training

The study sought to establish whether the training provided focused on enterprise resource planning. The study results revealed that 15.1% of the training provided focused on enterprise resource planning to a high degree, 63.4% to a fair degree and 21.5% to a low degree with a mean score of 2.06 and a standard deviation of 0.604 as shown in Figure 8 below.
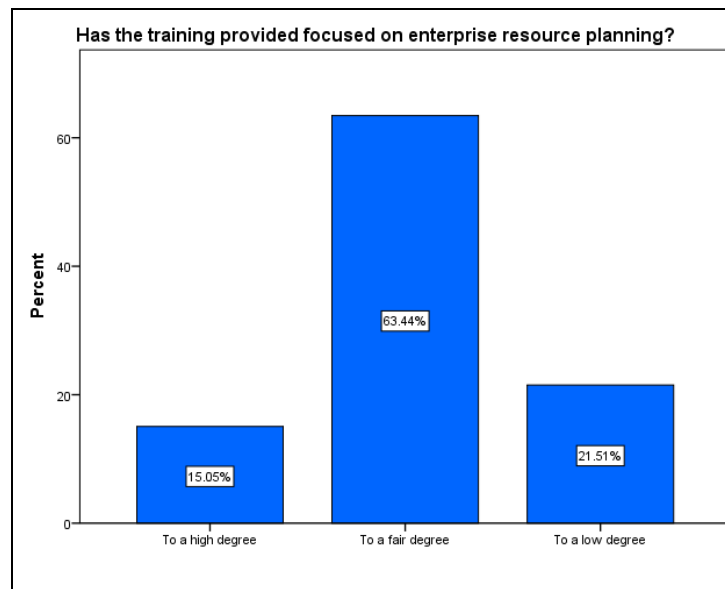
Figure 8: Level of training focus on enterprise resource planning

The study sought to establish the efforts of top management support have realized fruits among the members of staff working in the department. The results revealed that 50.5% of the respondents believe that top management efforts have bored fruits among the members of staff working in the department, 33.3% to a fair extent and 16.1% not at all with a mean score of 1.66 and a standard deviation of 0.744. This shows that top management support is paramount in the success of implementation of ERP.

Descriptive Statistics			
	N	Mean	Std. Deviation
Our organization has put in place modalities to impart knowledge on enterprise planning	93	3.70	1.159
Consultants implementing the enterprise resource planning ensure that the enterprise resource	93	3.56	1.492
Employees are individually encouraged to improved on their knowledge and skills levels to ensure seamless enterprise resource planning implementation	93	3.63	1.249
Recruitment and deployment in certain positions requires understanding the enterprise resource planning programme	93	3.72	1.136
The organization places a heavy premium on individual competencies and ensures employees undergo refresher programs	93	3.84	1.346
Valid N (listwise)	93		

Table 4: Employee Knowledge

The opinion that our organization has put in place modalities to impart knowledge on enterprise planning had a mean score of 3.70 and a standard deviation of 1.159. The opinion that consultants implementing the enterprise resource planning ensure that the employee's attitudes are in conformity with the industry best practices had a mean score of 3.56 and a standard deviation of 1.492. The opinion that employees are encouraged to improve on their knowledge and skills levels to ensure seamless enterprise resource planning implementation had a mean score of 3.63 and a standard deviation of 1.249. The opinion that recruitment and deployment in certain positions requires understanding the enterprise resource planning programme had a mean score of 3.72 and a standard deviation of 1.136. The opinion that the organization places a heavy premium on individual competencies and ensures employees undergo refresher programs had a mean score of 3.84 and a standard deviation of 1.346. This is in agreement with Chen, (2008) that carrying out needs assessment on staff competencies helps in discovering the competencies available and therefore building capacity on areas that an organization has deficiency.

The study sought to establish whether employee knowledge affect implementation of enterprise resource planning. The study results revealed that 65.6% affirmed that employee knowledge affects implementation of ERP and 34.4% had a contrary opinion with a mean score of 1.34 and a standard deviation of 0.478 as shown in Figure 9 below.
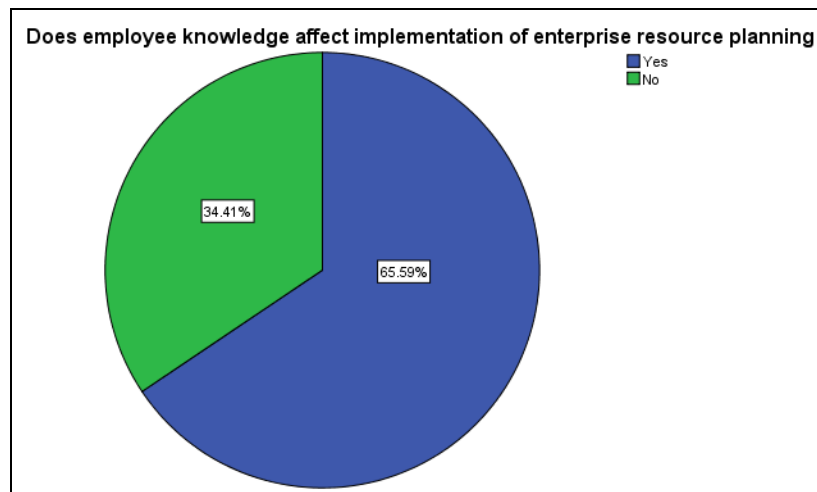
Figure 9: Employee knowledge affects implementation of enterprise resource planning

4.5.1. Resource Availability

The opinion that would you consider your organization as having the requisite resources for enterprise resource planning implementation had a mean score of 1.54 and a standard deviation of 0.802. 65.6% agree to a high degree, 15.1% agree to a fair degree, 19.4% agree to a low degree as shown in Figure 10 below.
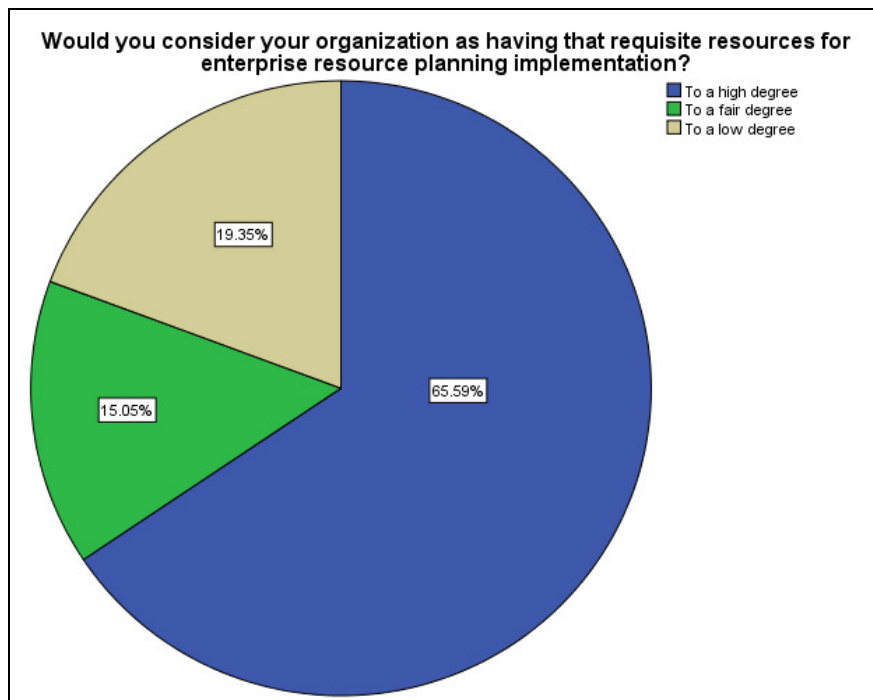

Figure 10: Requisite resources for enterprise resource planning

The opinion that have the resources availed had a particular focus on enterprise resource planning had a mean score of   1.52 and a standard deviation of 0.716. 61.3% of the respondents agreed to a great extent, 25.8% agreed to a fair extent and 12.9% not at all as shown in Figure 11 below.
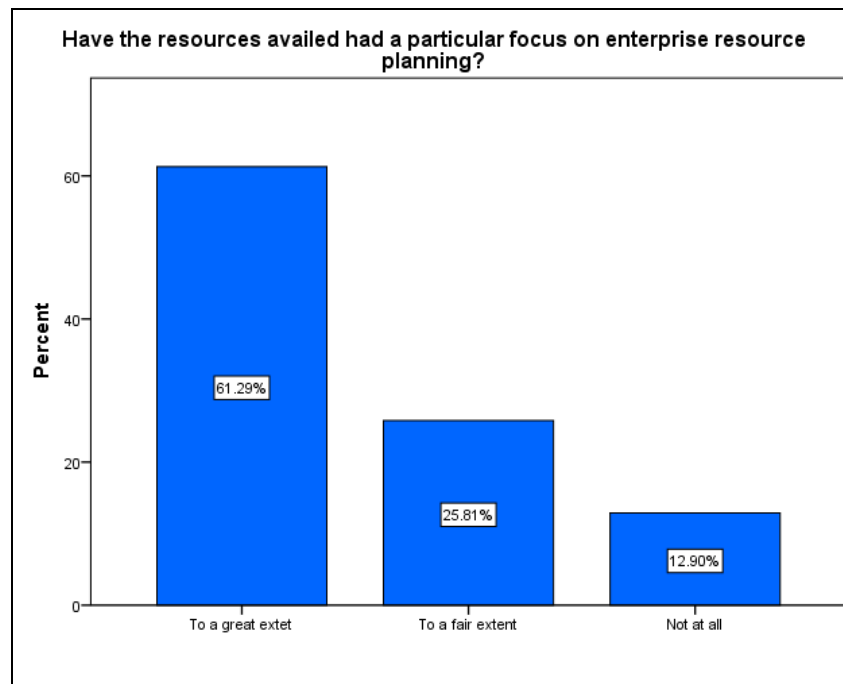
Figure 11: effects of resources on enterprise resource planning

Descriptive Statistics			
	N	Mean	Std. Deviation
Our organization has access to the requisite hardware for enterprise resource planning	93	3.39	1.225
Access to uninterrupted internet assures the organization has the ability to implement enterprise resource planning	93	3.97	.961
Trained administrators interacting with the ERP assure the organization ability to interact with the programme	93	3.31	1.285
Capacity to have an of site storage facility assurers the organization of the ability to effectively secure the stored data and non-disruption of ERP	93	3.69	1.207
Access to backup generators guarantees the organization ability effective implementation of ERP regardless of power outages	93	3.25	1.231
Valid N (listwise)	93		

Table 5: Resources Availability

The opinion that our organization has access to the requisite hardware for enterprise resource planning had a mean score of 3.39 and a standard deviation of 1.225. The opinion in agreement that access to uninterrupted internet assures the organization has the ability to implement enterprise resource planning had a mean score of 3.97 and a standard deviation of 0.961 signifying a high level of agreement. The opinion that trained administrators interacting with the ERP assure the organization ability to interact with the programme had a mean score of 3.31 and a standard deviation of 1.285. The opinion that capacity to have an of site storage facility assures the organization of the ability to effectively secure the stored data and non-disruption of ERP had a mean score 3.69 and a standard deviation of 1.207. Access to backup generators guarantees the organization ability effective implementation of ERP regardless of power outages had a mean score of 3.25 and a standard deviation of 1.231.

The opinion that does availability of resources affect the implementation of enterprise resource management planning had a mean score of 1.31 and a standard deviation of 0.466. 68.8% of the respondents affirmed that availability of resources affect the implementation of ERP and 31.2% had an opinion that availability of resources does not affect the implementation of ERP. This shows that majority of respondents are of the opinion that availability of resources affects ERP.
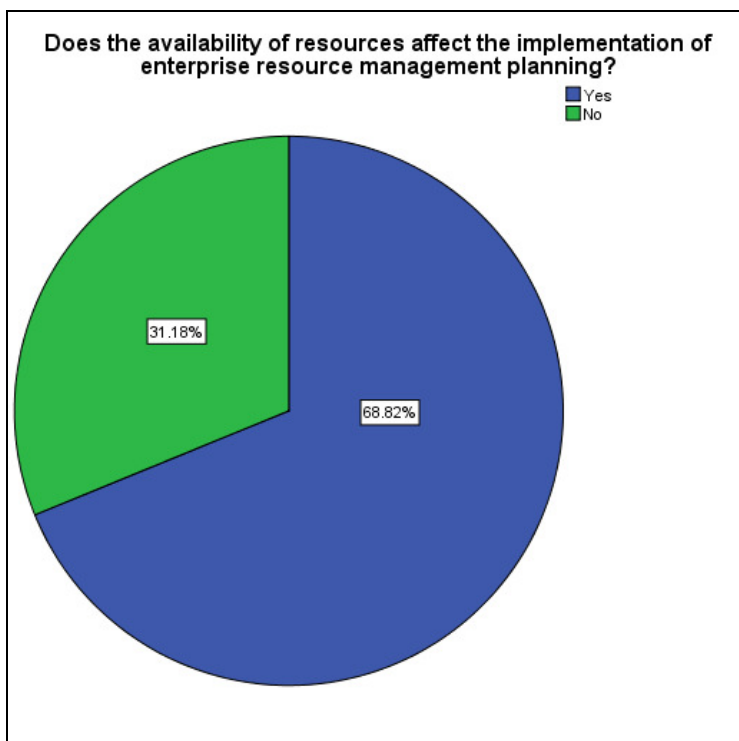
Figure 12: Effect of resources on implementation of ERM

4.5.2. Stakeholder Involvement
The study sought to establish whether stakeholders in Mombasa International Airport are involved in ERP. The study results revealed that 55.9% of the respondents affirmed that stakeholders are involved in ERP to a high degree, 29% to a fair degree and 15.1% to a low degree with a mean score of 1.59 and a standard deviation of 0.741 as shown in Figure 13. This results show that stakeholders involvement are involved to a high degree in implementation of ERP.
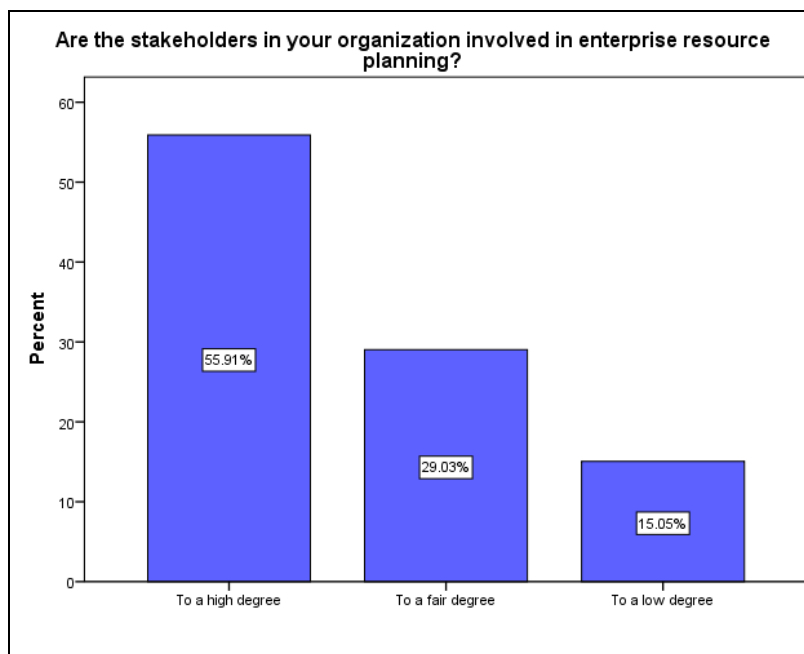

Figure 13: Level of Stakeholders Involvement

The study sought to establish whether stakeholders involvement adequate to ensure ERP adoption. 58.1% agreed to a great extent, 23.7% to a fair extent and 18.3% to a low extent with a mean score of 1.60 and a standard deviation of 0.782 as shown in Figure 14 below.
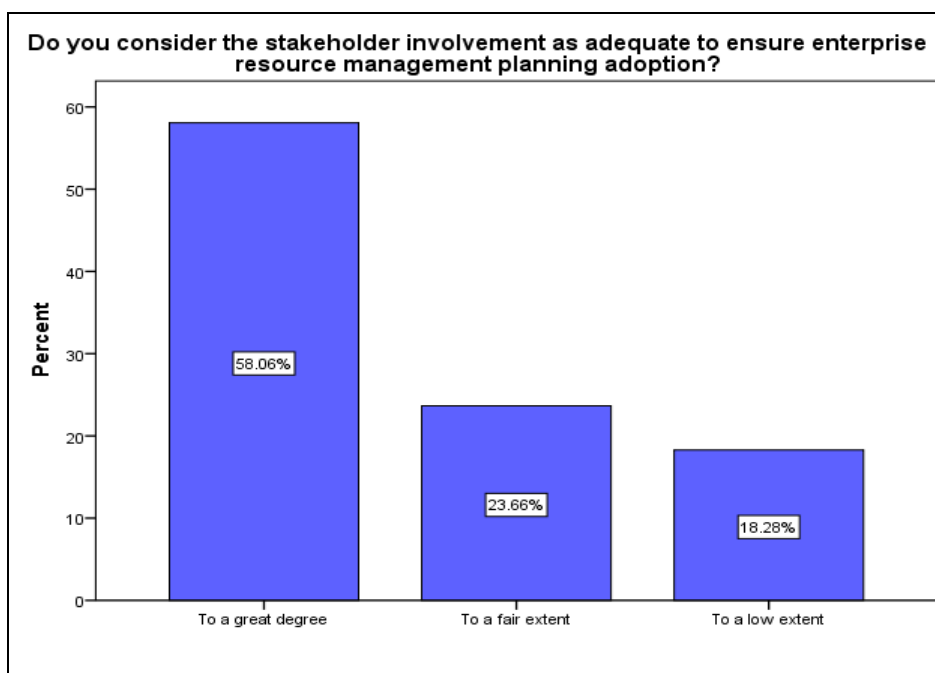
Figure 14: Adequacy of stakeholder's involvement in ERP

Descriptive Statistics			
	N	Mean	Std. Deviation
The consulting firm that has installed the ERP system regularly interacts with the employees of the organization to ensure that it is successfully implemented	93	4.01	.927
All the suppliers doing business with the organization have been educate on the application of the enterprise resource planning system to ensure that they understand it	93	3.47	1.017
Collaborating agencies and companies have been enlightened on the ERP to ensure seamless interactions	93	3.77	1.095
All the employees appreciate the enterprise resource planning system used by the organization	93	2.80	1.221
The top management has embraced ERP in totality	93	2.85	1.259
Valid N (listwise)	93		

Table 6: Stakeholders Involvement

The opinion in agreement that consulting firm that has installed the ERP system regularly interacts with the employees of the organization to ensure that it is successfully implemented had a mean score of 4.01 and a standard deviation of 0.927 signifying a high level of agreement. The opinion that all suppliers doing business with the organization have been educated on the application of the enterprise resource planning system to ensure that they understand it had a mean score of 3.47 and a standard deviation of 1.017. The opinion that collaborating agencies and companies have been enlightened on the ERP to ensure seamless interactions had a mean score of 3.77 and a standard deviation of 1.095. The opinion that the entire employee's appreciate the enterprise resource planning system used by his organization had a mean score of 2.80 and a standard deviation of 1.221. The opinion that top management has embraced ERP in totality had a mean score of 2.85 and a standard deviation of 1.259.

The opinion that stakeholder's involvement affects the implementation of enterprise resource planning. The study results showed that 69.9% affirmed that stakeholder's involvement affects implementation of ERP and 30.1% stakeholder's involvement does not affect implementation of ERP as shown in Figure 15 below.
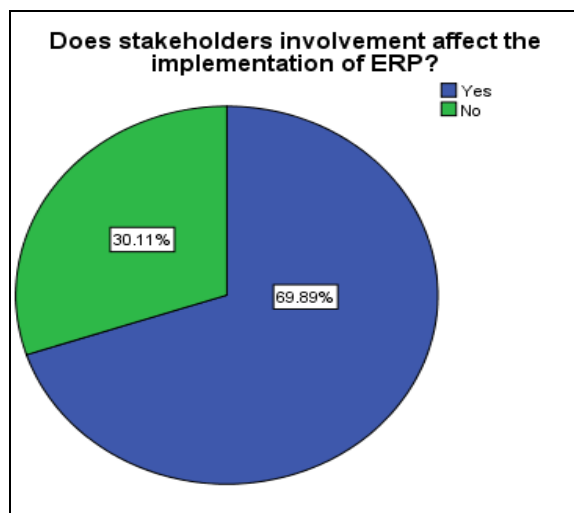
Figure 15: Stakeholder's involvement affects the implementation of ERP

4.5.3. Organizational Culture

The study sought to establish the ratings of organizational culture in your organization. The study results showed that 67.7% of their respondents rated good, 21.5% rated fair and 10.8% rated bad with a mean score of 1.43 and a standard deviation of 0.682 as shown in Figure 16.
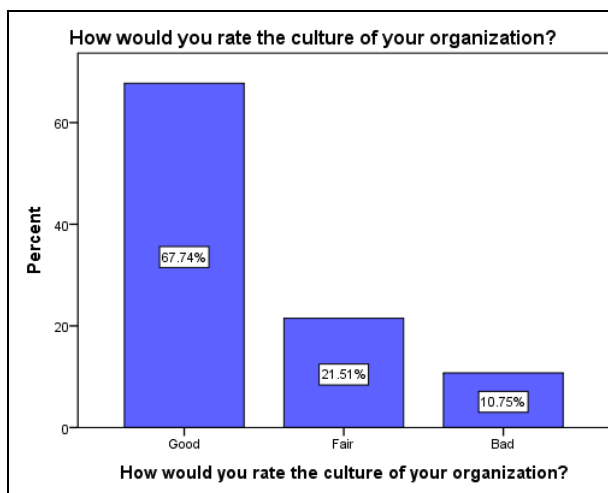

Figure 16: Ratings of organizational culture

The study sought to establish whether organizational culture systems have entrenched value system. The 67.7% to a high degree, 20.4% to a fair degree and to a low degree with a mean score of 1.44 with a standard deviation of 0.699 as shown in Figure 17 below.
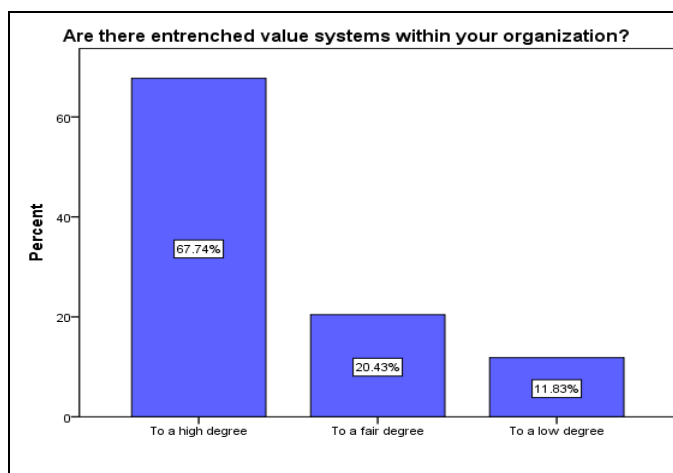

Figure 17: Entrenched value systems

Descriptive Statistics			
	N	Mean	Std. Deviation
The requisite change management programs have been put in place to ensure the employees adopt ERP	93	3.42	1.201
The organization has inculcated teamwork in the membership to ensure that employees adopt ERP	93	3.46	1.348
High levels of integrity within organization ensure that ERP is adopted	93	3.34	1.433
Capacity to ensure that evolving trends of industry best practices re enshrined has seen adoption of ERP	93	3.47	1.501
The need to ensure that the organization is an industry leader has ensured the adoption of enterprise resource planning	93	3.60	1.226
Valid N (listwise)	93		

Table 7: Organizational Culture

The opinion that requisite change management programs have been put in place to ensure the employees adopt ERP had a mean score of 3.42 and a standard deviation of 1.201. The opinion that the organization has inculcated teamwork in the membership to ensure that employees adopt ERP had a mean score of 3.46 and a standard deviation of 1.348. The opinion high levels of integrity within organization ensure that ERP is adopted had a mean score of 3.34 and a standard deviation of 1.433. The opinion that capacity to ensure that evolving trends of industry best practices are enshrined has seen adoption of ERP with a mean score of 3.47 and a standard deviation of 1.501. The opinion that the need to ensure that the organization is an industry leader has ensured the adoption of enterprise resource planning had a mean score of 3.60 and a standard deviation of 1.226.
The study sought to establish whether organizational culture affects the implementation of ERP. The results of the study 61.3% of the respondents affirmed that organizational culture affects implementation of ERP and 38.7% organizational culture does not affect implementation of ERP with a mean score of 1.39 and a standard deviation of 0.490 as shown in Figure 18
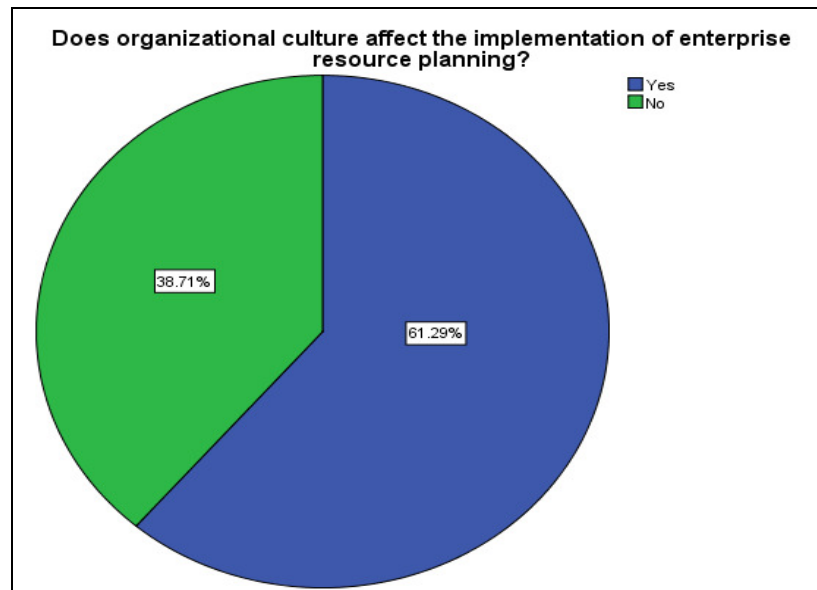

Figure 18: Effects of organizational culture on implementation of ERP

4.5.4. Implementing Enterprise Resource Planning

	N	Mean	Std. Deviation
Lack of sufficient funds affects implementation of ERP	93	3.81	1.135
Employee competencies affects implementation of ERP	93	3.55	1.426
Organizational culture affects implementation of ERP	93	3.71	1.148
Level of stakeholders' involvement affects implementation of ERP	93	3.85	1.233
Valid N (listwise)	93		

Table 8: Implementing enterprise resource planning

The study sought to establish the challenges of implementing ERP at Moi International Airport. The opinion that lack of sufficient funds affects implementation of ERP had a mean score of 3.81 and a standard deviation of 1.135. Employee's competencies had a mean score of 3.55 and a standard deviation of 1.426. The opinion that organizational culture affects implementation of ERP had a mean score of 3.71 and a standard deviation of 1.148 and the opinion that level of stakeholders involvement affects implementation of ERP had a mean score of 3.85 and a standard deviation of 1.233

4.6. Correlation Analysis
To establish the relationship between the independent variables and the dependent variable the study conducted correlation analysis which involved coefficient of correlation and coefficient of determination.

4.6.1. Coefficient of Correlation
In trying to show the relationship between the study variables and their findings, the study used the Karl Pearson's coefficient of correlation (r). This is as shown in Table 9 below. According to the findings, it was clear that there was a positive correlation between the independent variables namely employee knowledge, organizational resources, stakeholders involvement and organizational culture and dependent variable challenges of implementing enterprise resource planning. The analysis indicates the coefficient of correlation, r equal to 0.135, 0.235, 0.575 and 0.575 for employee knowledge, organizational resources, stakeholder's involvement and organizational culture. This indicates positive relationship between the independent variables namely employee knowledge, organizational resources, stakeholder's involvement and organizational culture and the dependent variable challenges of enterprise resource planning.

Correlations					
	Challenges of Implementing ERP	Employee Knowledge	Organizational Resource	Stakeholders Involvement	Organizational Culture
Challenges of Implementing ERP	1				
Employee Knowledge	.135	1			
Organizational Resource	.235[*]	.568[**]	1		
Stakeholders Involvement	.575[**]	.516[**]	.069	1	
Organizational Culture	.575[**]	.297[**]	.357[**]	.283[**]	1
*. Correlation is significant at the 0.05 level (2-tailed).					
**. Correlation is significant at the 0.01 level (2-tailed).					

Table 9: Pearson Correlation

4.6.2. Coefficient of Determination
Table 10 showed that the coefficient of determination was 0.529. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (Challenges of implementing ERP) that is explained by all independent variables. From the findings this meant that 52.9% of the challenges of implementing ERP are attributed to combination of the four independent factors investigated in this study**.**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.728[a]	.529	.508	1.62082
a. Predictors: (Constant), Organizational culture, Stakeholders Involvement, Organizational Resource, Employee Knowledge				

Table 10: Coefficient of determination (R^2)

This means that 52.9% of the relationship is explained by the identified four factors namely employee knowledge, organizational resources, stakeholder's involvement and organizational culture. The rest 47.1% is explained by other factors in the aviation industry not studied in this research. In summary the four factors studied namely, employee knowledge, organizational resources, stakeholder's involvement and organizational culture explains or determines 52.9% of the relationship while the rest 47.1% is explained or determined by other factors.

4.7. Regression Analysis

4.7.1. Analysis of Variance (ANOVA)
The study used ANOVA to establish the significance of the regression model. In testing the significance level, the statistical significance was considered significant if the p-value was less or equal to 0.05. The significance of the regression model is as per Table 11 below

with P-value of 0.00 which is less than 0.05. This indicates that the regression model is statistically significant in predicting challenges in implementing enterprise resource planning.

Basing the confidence level at 95% the analysis indicates high reliability of the results obtained. The overall Anova results indicates that the model was significant at F = 24.755, p = 0.000.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	260.131	4	65.033	24.755	.000[b]
	Residual	231.181	88	2.627		
	Total	491.312	92			
a. Dependent Variable: Challenges of Implementing ERP						
b. Predictors: (Constant), Organizational Culture, Stakeholders Involvement, Organizational Resource, Employee Knowledge						

Table 11: ANOVA

4.7.2. Multiple Regression Analysis

The researcher conducted a multiple regression analysis as shown in Table 12 so as to determine the relationship between challenges of enterprise resource planning and the four variables investigated in this study.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.281	5.013		4.644	.000
	Employee Knowledge	.140	.095	.197	1.472	.000
	Organizational Resource	.128	.088	.150	1.452	.000
	Stakeholders Involvement	.249	.088	.325	2.850	.005
	Organizational Culture	.435	.081	.488	5.383	.000
a. Dependent Variable: Challenges of Implementing ERP						

Table 12: Multiple Regression

The regression equation was:

$Y = 23.281 + 0.140X_1 + 0.128X_2 + 0.249X_3 + 0.435X_4$

Where;

Y = the dependent variable (Challenges of implementing ERP)

X_1 = Employee Knowledge

X_2 = Organizational Resources

X_3 = Stakeholder's involvement

X_4 = Organizational Culture

The regression equation above has established that taking all factors into account (Challenges of implementing ERP as a result of employee knowledge, organizational resources, stakeholder's involvement and organizational culture) constant at zero challenges of implementing ERP will be 23.281. The findings presented also shows that taking all other independent variables at zero, a unit increase in employee knowledge will lead to a 0.140 increase in the scores of challenges of implementing ERP; a unit increase in organizational resources will lead to a 0.128 increase in scores of challenges of implementing ERP; a unit increase in stakeholder's involvement will lead to a 0.249 increase in the scores of challenges of implementing ERP and a unit increase in organizational culture will lead to a 0.435 increase in score of challenges of implementing ERP. This therefore implies that all the three variables have a positive relationship with challenges of implementing ERP with organizational culture contributing most to the dependent variable.

5. Summary of the Findings, Conclusion and Recommendations

5.1. Introduction

This chapter gives a summary of the findings, conclusions and recommendations drawn from the findings. The study was carried out in the Mombasa International Airport.

5.2. Summary of Findings

The objective of this study was to examine the challenges of implementing enterprise resource planning in Mombasa International Airport out of 136 employees that constituted the sample size. To collect data the researcher used a structured questionnaire that was personally administered to the respondents. The questionnaire constituted 37 items. The respondents were employees of Moi

International Airport. In this study, data was analyzed using frequencies, mean scores, standard deviations, percentage, Correlation and Regression analysis. The study was conducted on 93 employees.

From the study, on gender the majority of respondents were male. On education level, the majority of respondents have graduate degree. Majority of respondents have worked for between 6-10 years. Majority of respondents are aware of enterprise resource planning and the organization has embrace it to a fair extent. The preferred mode of training staff is through in-house workshops and the training to a fair degree focuses on enterprise resource planning. The top management commitments contribute to a fair extent on implementation of enterprise resource planning.

On resources availability lack of resources such as finance technical skills and human resource affect greatly implementation of enterprise resource planning. Lack of stakeholder's involvement hampers implementation of enterprise resource planning and organizational culture as well hinders how enterprise resource planning can be achieved.

The coefficient of determination was 52.9% and the Pearson coefficient of correlation between the dependent variable and independent variables was 0.135, 0.235, 0.575 and 0.575 for employee knowledge, organizational resources, stakeholder's involvement and organizational culture respectively.

5.3. Conclusions

From the research findings, the study concluded all the independent variables studied have significant challenges of implementing enterprise resource planning as indicated by the strong coefficient of correlation and a p-value which is less than 0.05.The overall effect of the analyzed factors was very high as indicated by the coefficient of determination. The overall P-value of 0.00 which is less than 0.05 (5%) is an indication of relevance of the studied variables, significant at the calculated 95% level of significance. This implies that the studied independent variables namely employee knowledge, organizational resources, stakeholder's involvement and organizational culture have significant effect on the challenges of implementing enterprise resource planning at Moi International Airport in Mombasa.

5.4. Recommendations

The study recommended the following:
1. The study recommends that emphasis should be put on the incorporation of all the principles of change Management for successful ERP implementation for the success of the organization.
2. The role of uninterrupted internet access is apparent for the success of the ERP implementation and general success of the organization. Hence management should at least get three links from different companies to ensure zero downtime.
3. Improved stakeholders involvement has positive effects on overall ERP implementation.
4. The choice of trained ERP administrators (champions) should be done simultaneously in all departments' regardless and at least 3 people from every department should be trained. This will ensure assistance availed every time need arises by a staff.
5. The study recommends that top management should incorporate a programme of constant consultant's follow-up to the staff for success of the organization.
6. Flexibility of the organizational culture will determine the success or failure of achieving success in the whole implementation process.
7. The study recommends that firms should be flexible enough when implementing ERP systems and management should develop an ERP success implementation culture by changing perception of people.

5.5. Limitation of the Study

The respondents took a lot of time in filling in the questionnaires therefore the researcher had to collect the already filled questionnaires to do the analysis because of the time constraints. This made the response rate not to be 100% as expected. The respondents were also not free to give personal information as they considered it of private nature but the researcher assured them the information would be treated confidentially and purely used for academic purposes.

5.6. Areas for Further Research

This study focused on the challenges of implementing enterprise resource planning Mombasa International Airport in Mombasa County. Since only 52.9% of results was explained by the independent variables in this study, it is recommended that a study be carried out on other factors that affect challenges of implementing enterprise resource planning, specifically, a study on relationship between behavioral factors and challenges of implementing ERP from across the country should be carried out in order to pick out other variables not covered in this study. The research should also be done in other regions and the results compared so as to ascertain whether there is consistency on challenges of implementing ERP in Mombasa International Airport.

6. References

i. Adam, F., Sammon, D., & Carton, F. (2012). Project management issues in implementing ERP:Towards an Approach more suited to ERP projects. Cape Town: University of Cape Town SA.
ii. Akkermans, H., & Helden, K. (2014). Vicious and Virtuous cycles in ERP implementation: A case study of of interrelations between critical success factors. European Journal of Information System.
iii. Albano, F., Pino, J. A., & Borges, M. R. (2014). Participatory Business Process Reengineering design:Generation Solution. . XXI International Conference of Chilean Computer Science Society. Punta.

iv.   Al-Mashari, M., Al-Mudimigh, A., & Zairi, M. (2013). Taxonomy of critical factors. European Journal of Oprateional Research.
v.   Armstrong, A. G. (2013). A Framework for Information System Planning for E-business. Journal of Enterprise Information Management.
vi.   Baiman, S. (2011). Agency research in managerial accounting. Accounting, Organization and Society.
vii.   Bingi, P., Sharma, M., & Godla, J. (2014). Critical Issues Affecting an ERP Implementation. Journal of Information Management System.
viii. Blair, H. (2011). A critical evaluation of business reengineering. University of Edinburgh, Paper presented at the 15th Annual International Labour Process Conference. London: University of Edinburgh Press.
ix.   Boonstra, A. (2014). Interpreting an ERP-Implementation Project form a Stakeholder perspective. International Journal of Project Management.
x.   Borges, M. (2011). Critical Success Factors for Successful Implementation of Enterprise Resource PlanningSystems in Manufacturing Organization. International Journal of Operations.
xi.   Boykin, R. F. (2012). Enterprise Resource Planning Software: A solution to the return material authorization problem. London: Wiley & Sons.
xii.   Eden, C., & Ackermann, F. (2012). Making Staretgy: The Journey of Strategic Management. London: Sage Publication.
xiii. Fahmy, S., Haslinda, N., Roslina, W., & Fariha, Z. (n.d.). Evaluating the Quality of Software in E-book using the ISO 9126 Model. International Journal of Control and Automation.
xiv.   Fraenkel, J. R., & Wallen, N. E. (2011). How to Design and Evaluate Research in Education. New York: McGraw-Hill Higher Education.
xv.   Gardiner, S. C., Hanna, J. B., & Latour, M. S. (2012). ERP and the re-engineering of inductrial marketing processes:A perspective over view for the New-Age Marketing Manager. London: Oxford University Press.
xvi.   Goetsch, D. L., & Davis, S. B. (2013). Quality Management for Organizational Excellence: Introduction to Total Quality. New Jersy: Pearson.
xvii. Kalton, G. (2013). Introduction to Survey Sampling. London: Sage Publication.
xviii. Kettinger, W. J. (2014). Business Process Change: Reengineering Concepts Methods and Technology. Hershey USA: IGI Publishing.
xix.   Lewin, K. (2014). Beyond Change Management: How to achieve Breakthrough results through Consicious Change Leadership.
xx.   Mbwesa, K. J. (2014). Introduction to Management Research, A student hand book. Nairobi: Jomo Kenyatta Foundation.
xxi.   McKean, J. W., Terpstra, J., & Kloke, J. D. (2009). Computational Rank-Based Statistics. New York: Wiley Interdisciplinary Computational Statistics.
xxii. Mugenda, O. M., & Mugenda, A. G. (2006). Research Methods:Quantitative and Qualitative Approaches. Nairobi: Acts Press.
xxiii. Mugenda, O. M., & Mugenda, A. G. (2009). Research Methods: Quantittative and Qualitative Appraoches. Nairobi: Acts Press.
xxiv. Nah, F., & Michelle, M. (2014). A recurring Improvisational Methodology for Change managementin ERP implementation. Proceedings of the Americas Conference on Information Systems. New York.
xxv.   O'Brien, J. (2013). Management Information System. London: McGraw-Hill Inc.
xxvi. Ojo, O. (2010). Impact assessment of corporate culture on employee job performance. Business Intelligence Journal.
xxvii. Orodho, A. J., & Kombo, D. K. (2012). Research Methods. Nairobi: Kenyatta University Institute of Open Learning.
xxviii.Plotkin, H. (2014). How to make them work,Harvard Management ERP. Washington DC: Harvard University Press.
xxix. Polit, D. F. (2013). Nursing Research: Principles and methods. London: Wiley & Sons.
xxx.   Prasad, B., Sharma, M. K., & Godla, J. (2013). Critical Issues Affecting an ERP Implementation. London: Wiley & Sons.
xxxi. Rasmiy, M., & Tharwat, A. (2015). Enterprise Resource Planning: Implementation in the Egyptian Organizational Context. The Electronic Journal of Information Systems.
xxxii. Robert, J., & Elliot, B. (2011). Enterprise Resource Planning: Development an Directions For Operation Management Research. European Journal of Operational Research.
xxxiii.Rogers, D. S. (2013). The Supply Chain Management Process:. The International Journal of Logistics Management.
xxxiv. Sadagopan, S. (2014). The World of ERP. A managerial Perspective. New Delhi: Tata McGraw-Hill Publishing Company Limited.
xxxv. Scheer, A. W., & Habermann, F. (2013). Making ERP a Success. Communication ACM.
xxxvi. Scoltes, P. R. (2010). An Elaboration on Deming's Teachings on Performance Appraisal. Alexandria: American Society for Training & Development Research.