KNOWLEDGE MANAGEMENT OPPORTUNITIES AND BARRIERS FOR ORGANIZATIONAL COMPETITIVENESS IN JIMMA UNIVERSITY

BERHANU FITA

MASTERS IN INFORMATION SCIENCE (INFORMATION AND KNOWLEDGE MANAGEMENT)

JIMMA UNIVERSITY

NOVEMBER, 2013

KNOWLEDGE MANAGEMENT   OPPORTUNITIES AND BARRIERS FOR ORGANIZATIONAL COMPETITIVENESS IN JIMMA UNIVERSITY

BERHANU FITA

MASTERS IN INFORMATION SCIENCE (INFORMATION AND KNOWLEDGE MANAGEMENT)

ID NO: MSC-0145/04

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN INFORMATION SCIENCE (INFORMATION AND KNOWLEDGE MANAGEMENT)

DEPARTMENT OF INFORMATION SCIENCE, COLLEGE OF NATURAL SCIENCE, JIMMA UNIVERSITY, ETHIOPIA

NOVEMBER, 2013

APPROVAL SHEET

This thesis entitled "Knowledge Management Opportunities and Barriers for Organizational Competitiveness in Jimma University" has been read and approved as meeting the partial fulfillment for the award of degree of Master of Science in Information Science (Information and knowledge Management) in Department of Information Science, Jimma University, Jimma, Ethiopia.

Chairman   ……………   …………….

                                    Signature   Date

Lawrence Abraham Gojeh(Ph.D.)   …………….   …………….

                                    Signature   Date

Ato Worku Jimma (M.Sc.)   …………….   …………….

                                    Signature   Date

ACKNOWLEDGMENT

ABBREVIATIONS/ACRONYMS

ICT   Information and Communication Technology

ICTDO   Information and Communication Technology Development Office

 JU   Jimma University

JIT   Jimma University Institute of Technology

JUCAVM   Jimma University college of Agricultural and Veterinary

KM   Knowledge Management

KMF   Knowledge Management Facilities

KMO   Knowledge Management Opportunities

KMB Knowledge Management Barriers

NSCO   Natural Science college

PMCO   Public Health and medical science college

SSCO   Social Science college

TABLE OF CONTENTS

LIST OF TABLE

LIST OF FIGURES

Abstract

Knowledge management has received much attention in recent years and becoming the way forward for building sustainable organizational competitive advantage. However, there are factors that enable or hinder knowledge management. Jimma University is a higher educational institution that is equipped with experts in many disciplines and aspires to be the leading public premier in the country, renown in Africa and recognized in the world. The university becomes the primer amongst higher learning institutions in Ethiopia. However, there is a need to capitalize on it creatively. To remain at the forefront and achieve the vision, the university needs good capacity to manage individual capabilities by assessing all opportunities for knowledge management and barriers exist in the organization that could impact organizational competitiveness. The main objective of this study is thus to assess knowledge management opportunities and barriers for organizational competitiveness in Jimma University. Survey research and simple random sampling technique were used. Both quantitative and qualitative data were collected using questionnaire and interview from Jimma University staff and observation is also another collection method in this study. SPSS version 20 was used for data analysis. Socio-demographic data is summarized by frequency tables and summary statistics. Percentages and tables were used for description of the data as appropriate. This study identified the major KM opportunities, KM barriers and the effectiveness of JU in using KM opportunities in place for organizational competitiveness. The study further categorized the KM barriers in to two major categories, namely people related and organizational related barriers that hinder KM practices in JU. As outcome, this thesis provides a view of KM opportunities that enable the KM practices and KM barriers that impede the success of KM in JU for individual and organizational competitiveness, as well as the possible methods to use all KM opportunities and overcome the KM barriers to attain a competitive advantage through successful KM.

CHAPTER ONE
1.0   INTRODUCTION

1.1 Background of the study

In the present time knowledge is being seen as the key tool in terms of organizational competitiveness and sustainability. On this very issue different authors viewed their opinions of which, Alwis and Hartmann (2008) argued that knowledge forms the foundation to improve company value and for building sustainable competitive advantage. Bollinger and smith (2001) stated that knowledge is the driving force in today's economy and it has become "critical" for organizations to find ways of accessing existing knowledge and creating new knowledge. Smith and Mills (2010) opined that effective management of knowledge resources is vital for individual and organizations that want to leverage their knowledge assets for competitive advantage in an organization with knowledge management.

Knowledge management (KM) is about the management of the "intellectual capacity" (Martensson, 2000). Anantatmula (2005) argued that improving individual and organizational competitiveness by using KM initiatives is an investment decisions. These initiatives are expanding across all types of organizations and companies worldwide and many organizations benefit from the successful implementation of KM (Ribiere and Tuggle, 2005). Materska (2004) by observing the characteristics of the world on knowledge management stated that it includes: knowledge society, knowledge-based economy, knowledge-intensive organization, knowledge workers, organizational knowledge, knowledge culture and knowledge management, and competitive intelligence. These are the new factors shaping today's library and represent a significance career opportunities for librarians to work on the information objects (explicit knowledge) and knowledge environment that involves people.

Turner and Minonne (2010) argued that successful managers focus on factors that are critical in establishing and maintaining an organization's competitive edge and the knowledge and skills of employees is one of those factors and it requires proactive management attention. This is achieved through knowledge management, which has changed the paradigm of most organizations by turning the organizational climate to be a learning block where knowledge is discovered, captured, shared and applied to maximize and actualize their goals and objectives. It has given organizations a

sustainable competitive advantage, setting them at the high ranks in their market domains (Okyere-kwakye and MdNor, 2010).

Some Scholars in their studies raised the issues of opportunities and barriers that enable or hinder organizational knowledge management. Bollinger and smith (2001) stated that "most of the barriers to effective KM involve people". Humans are complex with psychological needs and they categorized KM barriers from three perspectives, namely, organizational, team/group and individual. But Ribiere and Tuggle (2005) indicated that trust is the most important factor that impact (enable or hinder) individual and organizational knowledge management , i.e. without trust, knowledge management will fail, regardless of how thoroughly it is supported by technology and even if the survival of organization depends on effective knowledge transfer. However, Alwis and Hartmann (2008) opined that lack of motivation; organizational structure and systems are barriers that influenced/hindered knowledge transfer. Keyes (2008) argued that lack of time, fear of lost job security, lack of social network, fear of loss of ownership' are some barriers of knowledge management and he grouped barriers in three major categories: individual, organizational and technological barriers. He also stated that technologies that are corporate sponsored are among the opportunities that play roles in stimulating knowledge management culture. Information and communication technology (ICT) allows firms to create, store and share knowledge to gain individual and organizational competitive advantage (Brinkley, 2006).

Rahel and Ermias (2011) stated that higher learning institutions in Ethiopia have developed fairly advanced intra-institution and inter-institution network infrastructure. However, no content or information services are run on the network. Although, the three major tasks of Jimma University (JU) are education, research and service to community, of these three academic research is the most important and the basis for creation of new knowledge. In this task therefore, knowledge is created to allow the education to take place in a knowledge management terminology. Knowledge is disseminated after it has been created through research and gained from experience for sharing amongst the university community and surrounding community.

JU with its well known community based education philosophy recognizes knowledge dissemination as not only the regular class dissemination of knowledge, but also the whole complex attitude formation/change, value transfer, skills and trainings. While giving service to community, it is also JU's task that it built in the knowledge creation and knowledge dissemination perspectives. The service to community here refers to the process of transferring university knowledge to the

larger society and beyond, where it considers the most efficient contact between university research results and experiences and possible applications in societies' life.

1.2   Statement of the problem

In the present time knowledge is being seen as the key tool to improve company value and for building sustainable organizational competitive advantage. Managing knowledge assets is very crucial for organizational competitiveness and has become widely recognized. But there are factors that enable or hinder knowledge management practices of the organizations. Jimma University as higher educational institution focuses on three major tasks, namely teaching, research and community service and in the process of realizing these tasks, knowledge creation, knowledge dissemination and knowledge application is apparent that means the knowledge created by research and gained from experience is spread among university community and the surrounding community. Knowledge management is to guarantee organizational successes; unfortunately Jimma University has not grown much in managing knowledge assets. In the process of managing knowledge assets there are opportunities that enable or barriers that impede the knowledge management practice of the organizations. So far no research has been done on the knowledge management opportunities and barriers for organizational competitiveness in Jimma University. Therefore, it is very important and high time to investigate the existing opportunities for KM, identify barriers to use knowledge assets in the University to ensure organizational competitiveness and guarantee the success of the University.

1.2 Research questions

1.3.1 What are the Knowledge management opportunities put in place in Jimma university

1.3.2   What are the of Knowledge management barriers that are affecting Knowledge management practices of Jimma university?

1.3.5   To what extent Jimma university using Knowledge management opportunities for organizational competitiveness?

1.4 Hypotheses

1.4.1   H0 : there is no difference attitude of staff on the Knowledge management opportunities and effectiveness of using opportunities put in place for JU categories of staff (academic and administrative) for organizational competitiveness

Ha : there is a significant difference attitude of staff on the Knowledge management opportunities and effectiveness of using opportunities put in place for JU categories of staff (academic and administrative) for organizational competitiveness

1.4.2   H0: there is no difference attitude of staff on the Knowledge management barriers for JU categories of staff (academic and administrative) for organizational competitiveness

Ha: there is a significant difference attitude of staff on the Knowledge management barriers for JU categories of staff (academic and administrative) for organizational competitiveness

1.4   Objective of the study

The general objective of this study is to assess knowledge management opportunities and barriers for individual and organizational competitiveness in JU. The specific objectives include:

1.4.1   To identify the types of Knowledge management opportunities put in place for JU categories of staff

1.4.2   To also identify the types of Knowledge management barriers that are affecting the JU knowledge management practices.

1.4.3 To what extent Jimma University effective in using KM opportunities in place.

1.5   Significance of the study

The study is very significant in a number of ways that include contributing to filling the knowledge management gap of JU, help top management of the institution have a clear understanding about knowledge management in the organization and take the necessary measures to improve organizational competitiveness, help in improving organizational knowledge management culture. It as well contribute to the University so that designing a strategy to remain at the forefront in the

ever increasing competition amongst higher learning institutions in Ethiopia and lastly it serves as a stepping stone in stimulating other researchers in the field of knowledge management .

1.6 Limitations and Delimitations

The limitation of this study was some respondents were unwilling to fill the questionnaires and unavailable for interview and replaced by other respondents. This study delimited itself to Jimma University. Furthermore, the scope of this study was delimited to investigating the knowledge management opportunities and barriers in the university, addressing the opportunities and barriers for organizational competitiveness. In addition staff whose academic statuses below BA/BSc degree were not included.

1.7 Operational definitions

1.7.1 Knowledge: The understanding, awareness, or familiarity acquired through study, investigation, observation, or experience over the course of time and it is an individual's interpretation of information based on personal experience, skills, and competencies.

1.7.2 **Knowledge management:** strategies and practices used in an organization in acquiring, creating, documenting, organizing, disseminating and sharing to apply knowledge

1.7.3 **Knowledge management Opportunities**: are facilities or openings that improve organizational knowledge management

1.7.4 **Knowledge management barriers**: are factors or obstacles that negatively impact or holdback organizational knowledge management

1.7.5 **Knowledge management culture**: practices of knowledge organizing, creation, dissemination, sharing of individual or organization

1.7.6 **Employees**: all Jimma University staff with BA/BSc degree academic status and above

1.7.7 **Competitiveness**: the capabilities of firm to compete successfully

1.7.8 **Organizational competitiveness:** the capability of firms to have well planned and implemented competitive strategies to cope with the changing world, ensure its existence and become leading organization.

1.7.9 Academic staff employees of JU that working on teaching and research

1.7.10 Administrative staff employees of JU that working on non- teaching activities

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Knowledge types

Knowledge is divided into different types: internal and external knowledge, tacit and explicit knowledge, individual and collective knowledge and theoretical and practical knowledge. Internal knowledge derives from information sources within an organization; by contrast, external knowledge is available from outside that acquired from Internet or other companies expert (Wilde, 2011).

Explicit knowledge is clearly formulated, codified and stored in a database where as tacit knowledge is the unarticulated knowledge that is in a person's head that is often difficult to describe" (Bollinger and Smith, 2001). Explicit knowledge exists indifferent form such as words, sentences, documents, organized data, and computer programs and other forms. One can also distinguish among "know what", "know how", and "know why" levels of knowledge appropriate response to stimuli. "Know what" knowledge specifies what action to take when presented with stimuli, the next higher level of knowledge is "know how" knowing how to decide on an appropriate response to stimuli and the highest level of knowledge level is "know why" knowledge (William, 2009).

Individual and collective knowledge are another category of knowledge types. According to Wilde (2011) Individual knowledge is the knowledge held by employee in a company and mainly present in implicit form, i.e., it resides in the head of individual. Organizational or collective knowledge by contrast occurs through communication and interaction among employees.

Another types of knowledge are theoretical and practical knowledge Theoretical knowledge is internal and external company related facts and is easy to put into words where as practical knowledge is "know how" that include abilities and skills and difficult to put into verb and visualize (Wilde, 2011). According to Bradley (2012), theoretical knowledge teaches the why. It helps us understand why one technique works where another fails. It shows us the whole forest, builds the context, and helps us set strategy. Theoretical knowledge can often lead to a deeper understand of a concept through seeing it in context of a greater whole and understanding the why behind it where

as practical knowledge helps us acquire the specific techniques that become the tools of our trade. It sits much closer to our actual day-to-day work.

2.4   Knowledge management

William (2009) stated that for centuries; scientists, philosophers, intelligent laymen have been concerned about creating, acquiring, and communicating knowledge and improving the re-utilization of knowledge. However, it is only in the last 15-20 years or so that a distinct field called "knowledge management" has emerged. Knowledge management is the planning, organizing, motivating, and controlling of people, process and systems in the organization to ensure that its knowledge related assets are improved and effectively employed.

Pircher and Pausits(2011) defined Knowledge management as a process that forms determining factors for employees so as to foster the transfer, development, and utilization of the knowledge of the organization in the best possible way in order to be able to achieve the strategic aims of the organization. KM is essentially an organizing principle aimed at satisfying and where possible, exceeding customer expectation (Hlupic, Pouloudi and Rzevski, 2002)

Knowledge management is also defined as a process that forms determining factors for employees so as to foster the transfer, development, and utilization of knowledge of the organization in the best possible way in order to be able to achieve the strategic aims of the organization (Richard and Attila, 2011).

Knowledge management is the broad concept that addresses a range of strategies and practices used in organization to identify, create, organize, represent, store, share, disseminate, search, analyze and improve its insight and experiences (Laoufi .*et al*,2011*)*.

2.7 Knowledge management process

According to Jones and Leonard (2009), several steps are involved in a KM process. Example of KM process is presented in figure 2.1 below. One of the most difficult and most interesting steps in the KM process is capturing tacit knowledge and changing into organizational knowledge. An organization needs to know what it knows and needs to be able to put this knowledge in some format where all the employees can utilize it. In other words the organization must be able to turn tacit knowledge to explicit information. In turn, employees need to be able to use the explicit

knowledge to turn it in to their own knowledge and be able to create and share additional knowledge from it.

Knowledge management has changed the paradigm of most organizations by turning the organizational climate to be a learning block where knowledge is discovered, captured, shared and applied to maximize and actualize their goals and objectives. KM has given any organizations a sustainable competitive advantage, setting them at the high ranks in their market domains. Examples of such organizations are Xerox, IBM, Microsoft, British telecom (Okyere-wakye and MdNor, 2010)

2.8 Knowledge management opportunities

The ability to create, store, and share knowledge through networks and communities using the ICT technologies allows firms to exploit the unique properties of knowledge to gain competitive advantage. This is due to knowledge is the ultimate economic renewable as the stock of knowledge is not depleted by use. Indeed, the value of knowledge to an economy comes from sharing with others (Brinkley, 2006).

The technologies used in Indian Auto component manufacturing that enhance and enable the implementation of KM are internet, intranet, data warehousing, extranet, decision support system-commerce(Pillania,2008). Therefore, other organizations can use these technologies as a good opportunity to enhance and enable their KM practices.

There are different opportunities in organizations for managing knowledge. These opportunities could be technological, organizational, strategic, financial, social and cultural. The culture encourages knowledge sharing so people are recognized publicly and rewarded for sharing. Top management recognizes trust as the bandwidth of sharing knowledge and has made investments in trust building as one of their top priorities and to discourage hoarding of knowledge (Karl-Erik, 1999).

Knowledge management system (KMS) is an opportunity for managing knowledge in organization for supporting capturing, creation, storage and dissemination of information and knowledge. The idea of KMS is to enable organizations to have access to the documentation, facts, and sources of information, competencies and solutions. A key principle of KMS is to improve the search mechanisms of information and knowledge (Laoufi .*et al,*2011)

Similarly Abdullah *et al* (2007) argued that KMS become a common medium to distribute knowledge of these days by using the IT as enabler tools for everyone to reach, share with the members, and use it from any work place in world any time. In higher education institutions the collaboration tools of KMS explore the opportunity to create, gather, access, organize, distribute and disseminate knowledge to their community of practices for many purposes such as learning process.

The development of KMS involved a number of KM enabling technologies. The combination of these technologies produces a system that can collect, sort, store, and share information and knowledge throughout the organization. These technologies are presented in figure 2.2 and table 2.1 below. Intranet, Groupware, Database management system, information retrieval engines, Data warehousing and data mining, Document management system, collaboration, and push technologies are some examples.
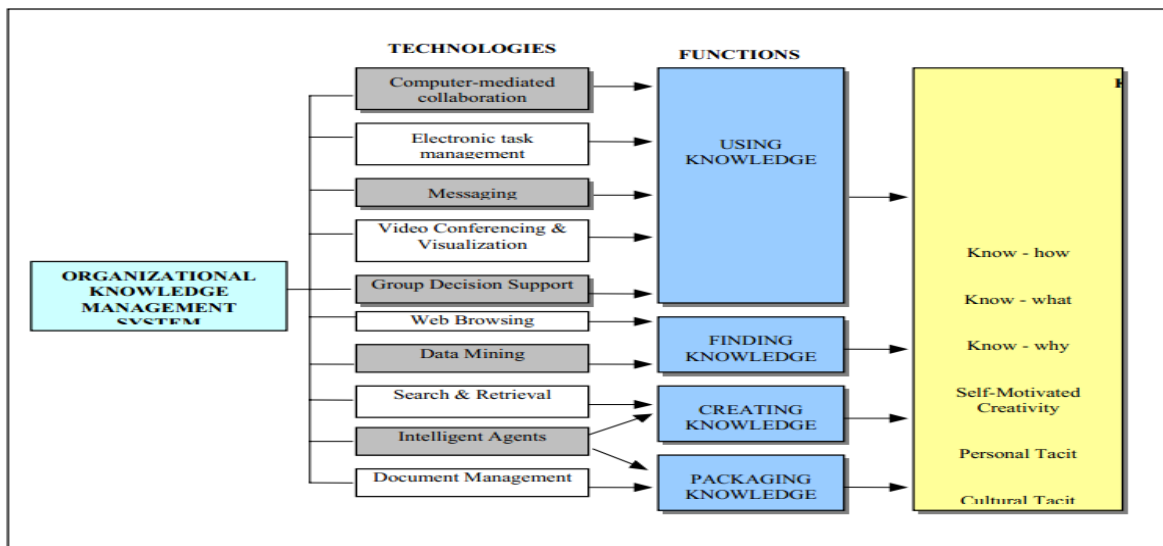
Figure 2.2 Organizational Knowledge management system (taken from Abdullah *et al*.,2007)

Table 2.1 KM enabling Technologies (taken from Lebega, 2010).

ICT Tools/Networks	Description of Roles	Examples
Knowledge portals	Search and access to web-based knowledge	Google, Yahoo
E-Document management systems	Knowledge repositories created by individual institutions	Digital Library
Academic publishing	Proprietary digital libraries for electronic access to academic publishing	`Emerald , Elsevier
Academic contents and Exchange	Electronic collections of course materials and learning objects	JSTOR, MIT open courseware
Database Management Systems(DBMS)	Set of computer programs that control the creation , maintenance, and the use of database	Student records
Data warehouse	A repository that facilitates reporting and analysis of data	Financing and budgeting of data
Data Mining	The process of extracting patterns of data	Academic profiling
Groupware	Is designed to help people involved in a common task achieved their goals	Knowledge forum, Synergies, Wiki
Social Communities of Interests	Social networks drawn together to share knowledge and build relation ship	Face book, MySpace, Flikr
Individual Communities of Interests	Tools for individual to manage personnel knowledge and networks	Blogs, Twitter

2.9 Barriers of knowledge management

According to Bollinger and smith (2001), most of the barriers to effective knowledge management involve people. Humans are complex with diverse psychological needs. Most knowledge management systems require that data and document be stored in knowledge bases. From an organizational perspective, the process of building these knowledge repositories can be very time-consuming, labor intensive, and costly

. People are already busy and sharing knowledge may mean changing the way they work or adding extra steps to the process to extract the data and enter it into a repository. From team/group perspective, members may be reluctant to share knowledge if they fear criticism from their peers or recrimination from management. Reward systems are sometimes based on what a person knows and

individual effort and may be source of advancement within an organization (Bollinger and Smith, 2001).

According to Abdolshah (2011), Iranian institutions are facing different challenges (barriers) in implementing knowledge management. The following figure (figure 2.3) shows the cause of weak knowledge management in typical organizations.
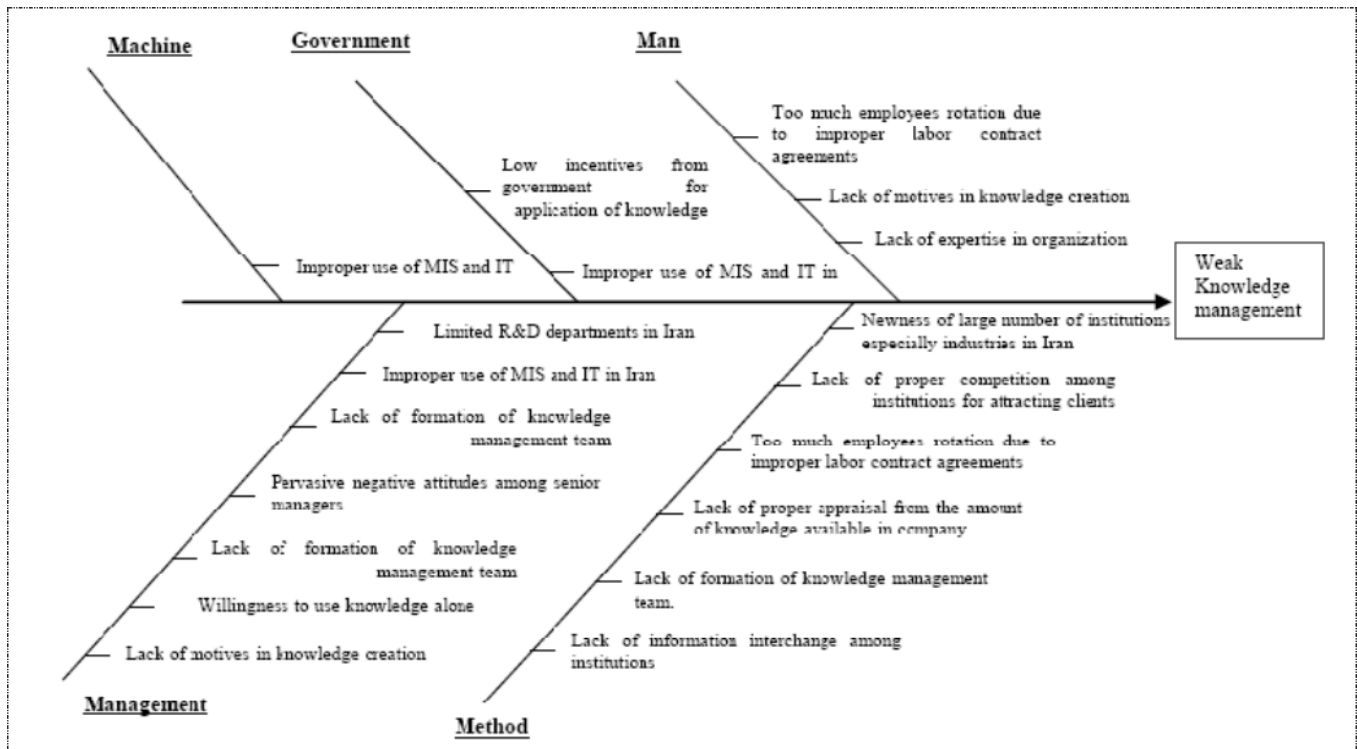
Figure2.3 Cause and effect of weak knowledge management (source: Abdolshah, 2011)

The literatures reviewed above showed that different organizations have different KM opportunities and barriers that impact individual and organizational competitiveness, however the context in which such studies conducted in non-educational sectors and not in Ethiopian organizations and little emphasis has been given on higher education in general.

. JU is a public higher educational institution established in December 1999 by the amalgamation of Jimma College of Agriculture (founded in 1952), and Jimma Institute of Health Sciences (established in 1983). JU is Ethiopia's first Innovative Community Oriented Education Institution of higher learning. Since its establishment, it has been playing significant role in the country. The vision of JU aspires to be the leading public premier in the country, renown in Africa and recognized in the world. To achieve the vision and objectives of the University the ultimate

resource and tool is individual and organizational knowledge in the university. Hence, the knowledge asset in the university should be managed well.

The strategic plan of the university states that the future academic and administrative tasks of the university highly depend on the effective utilization of ICT infrastructures and services. Management Information Systems (MIS) will be implemented to take the administration of the university to a higher level. The requirements of the academic wing are also expected to increase to integrate e-learning with the classical teaching-learning process in the near future. However, KM opportunities and barriers in JU and its impacts on individual and organizational competitiveness have not yet been assessed. Therefore, there is a need to assess knowledge management opportunities and barriers that impact individual and organizational competiveness in JU.

CHAPTER THREE

3.0   METHODOLOGY

3.1 Description of study area

Jimma University is found in Jimma town, South west Ethiopia and located 350km from Addis Ababa. Its geographical coordinates are approximately $7^{o}41'N$ latitude and $36^{o}50'E$ longitude. The town is found in an area of average altitude, of about 5400 ft (1780 m) above sea level (Seifu, 2002).

3.2 Research method

The research method for this study was survey research method, where the researcher intents to assess knowledge management opportunities and barriers for organizational competitiveness in Jimma University.

3.3 Population of the study

Currently, the university has five colleges (college of Natural sciences, college of social science and law, college of public health and medical sciences, college of business and economics and college of agriculture and veterinary Medicine) and two institutes (Jimma University institute of Technology and Institute of professional development studies). In addition to these colleges and institutes there are the administrative offices of the institution (i.e Library, ICT Development Office, Human resource Management Office, Finance Office, Procurement Office, Auditing Office, External Relation Office, Registrar Office, Student Affairs and Distance/continuing education Office). So the target population of the present study comprises of academic and administrative staff from all colleges, institutions and offices of JU.

3.4 Sample size and sampling techniques

Simple random sampling technique was used for this study to have the representations of colleges, institutions and offices staff of the University because of this method of sample selection gives each possible sample combination an equal probability of being picked up and each item in the entire population to have an equal chance of being included in the sample. This technique was applied to sampling without replacement that is once an item is selected for the sample, it cannot appear in the

sample again. To take 336 sample of population consisting of 1495 staff the number was assigned for each staff in the sample frame and write each number on a slip of paper, mix these paper in a bag and pick 336 numbers from bag randomly.

The sample size was calculated using a single population proportional formula.

$$n = \frac{z\left(\frac{\alpha}{2}\right)2 * P(1-p)}{d^2}$$

Where

- **n**= the desirable calculated sample size
- **Z ($\alpha/2$)**=1.96 (95% confidence level for two side)
- **p**= proportion of Employees who agree on proper knowledge management opportunities and barriers(50%)
- **d**= degree of accuracy desired setting at (5%)

  Therefore the value of **n** was calculated as follows

n = $\frac{(1.96)^2 * 0.5(1-0.5)}{(0.05)^2}$ =384

Since the total Employee is in Jimma University is less than 10000 Finite population correction formulas was applied to determine the final sample sizes as follows:

$$nf = \frac{no}{1 + {no}/{N}}$$ Where,

nf = the desired sample size when population(Employee) is less than 10000

n = the desired sample size when population (employee) is more than 10000

N = the estimate of population (employees) in Jimma University, which is 1495(1362 academic and 133 administrative staff) Jimma University population (Employee) is less than 10000. So that **nf**= 384/1+(384/1495)=306 Considering 10% non response rate the final sample size was 336

3.5 The study variables

The variables considered in this study were Sex, Age, Educational status, College /institute /Office, Years of services, KM facilities, people and organization related factors. Dependent variable organizational competitiveness was measured by asking sampled JU staff about KM facilities, organizational related factors and people related factors that impact the organizational competitiveness.

3.6 Data collection methods

To minimize the disadvantages of qualitative and quantitative approaches, mixed approach was employed for this study. Qualitative dimension refers to data that was collected from some top management through interview and observation whereas, quantitative data reefers to the data collected from academic and administrative staff using questionnaire. In order to meet the objectives of the study, questionnaire, interview and observation were employed as data collection methods.

3.6.1 Instrumentations

3.6.1.1 Questionnaire

336 questionnaires were distributed for JU staff (256 academic and 80 administrative staff) at differentiate colleges, institutes and offices. Questionnaire was selected because of the freedom of respondents and helps to catch their viewpoints regarding knowledge management opportunities and barriers. Questionnaire also helps to collect a good deal of data from a large number of respondents within a short period of time. Therefore, structured questionnaire was adapted after review of relevant literature (see chapter 2) and modified to local situations from previous tools that were applied in different studies related to knowledge management. The questions and statements of the questionnaire were grouped and arranged according to the particular objective that they can address (see appendix A).

A four section instrument was used to collect data from employees in Jimma University containing the following sections: (a) Socio demographic information (profile) of the respondents (b) knowledge management facilities of Jimma University, (c) organizational related factors (d) people related factors. (Likert scale of 1- 5) was used so that respondents express their level of agreement on assessment of statements using five point scale.

3.6.1.2 Interview

Interview was another instrument that was used in this study using interview schedule (see Appendix B) to collect data from nine randomly selected Office holders and College/Institutes Deans/Directors to gain a better understanding of KM opportunities and barriers of JU.

3.6.1.3 Observation

Observation was the third instrument that was employed using observation schedule (see Appendix C) to collect data on knowledge management opportunities and barriers in Jimma University. The wiki website, Library e-resources were studied to get a better understanding of knowledge management practices .Squid proxy server log files were observed to understand the technological usage of staff in JU. JU business strategy document was consulted to know the alignment of JU business strategy with KM strategy

Table 3.1.Summary of variables and their respective sources, instruments of data collection and techniques of analysis

No	Variables	Sources and instruments of data collection			Data analysis techniques
		Employees' Survey	Deans and office Directors' interview	Observation	
1	KM opportunities	✓	✓	✓	Statistical and narration/description by word
2	KM barriers	✓	✓	✓	Statistical and narration/description by word
3	Effectiveness of using KM opportunities		✓	✓	Narration/description by word

3.7 Data analysis techniques

Analysis of the quantitative and qualitative data was carried out. The data collected from different sources were checked for completeness and categorized to analyze. Then SPSS version 20 was used to code, process and analyze the data. Socio-demographic data of respondents was summarized by frequency tables and summary statistics. Percentages and tables were used for description of the data obtained from respondents as appropriate.

For statistical tests, the cut of value set is p<0.05 and ratio with 95% confidence interval was used to identify the opportunities and barriers associated with knowledge management. The quantitative data was analyzed through the application of both the descriptive and inferential statistics. Mean and standard deviation and t-test were computed to investigate the KM opportunities and barriers in JU between academic and administrative staff in the university. Accordingly, the finding was analyzed in such a way that the mean (X) score range 1.0 – 1.80 was considered strongly disagreed, from 1.80 – 2.60, disagreed, if it is within 2.60 – 3.4 it was considered neutral, from 3.4 – 4.2, agreed and from 4.2 it was considered strongly disagreed.

3.8 Data quality assurance

A two day intensive training was given to data collectors and supervisors by the researcher on data collection process. As soon as the training was completed, the feedback given by professionals was documented for further consideration for the instrument adjustment. Based on the study feedback, some problems, especially in the clarity, logical flow and skipping patterns was observed. Accordingly, amendment was made on the respective instruments.

The supervisors and researcher closely followed the day to day data collection process. Moreover, responses were crosschecked for missing, irregularities, inconsistencies and unlikely responses based on which measures were taken. Categorization and coding of the data was also part of the data quality control.

3.9 Ethical considerations

The necessary explanation about the purpose of the study and about its procedures was done. Consent was also obtained from each respondent. Those who were unwilling to participate in the study were omitted. To ensure confidentiality, anonymous interview was conducted.

3.10 Organization of the study

This study is organized into five chapters. Chapter one deals with the introduction information about the title under consideration. Chapter two presents the review of related literature and Chapter three deals with the research methodology. The fourth chapter deals with presentation of data analysis, result and discussion. Summary of findings, conclusion and recommendations is presented in the fifth chapter.

CHAPTER FOUR

4.0 DATA ANALYSIS, RESULT AND DISCUSSION

4.1 Data Analysis and Result

4.1.1 Response rate

Based on the sample selection procedures in methodology in chapter three 336 academic and administrative staff were set as a study participant for quantitative study to assess knowledge management opportunities and barriers that affect the organizational competitiveness in JU. Accordingly, 336 questionnaires were distributed to JU staffs in different colleges, institutes, and offices based on the sample size calculated earlier. Of the 336 questionnaires 309 (91.96%) were returned. After eliminating poor quality and missing values 292 (213 academic and 79 administrative staff, see table 4.3 below) questionnaires were identified as properly filled, which is 86.9 % response rate. This is depicted in table 4.1 below and also at college level in table 4.2. The response rate shows that the study is relevant to JU staff and the high commitment of researcher and data collectors in monitoring all the process of data collection.

Table 4.1 Response rate of the study

Questionnaires	Number of questionnaires	Percent
Questionnaires Distributed	336	100
Questionnaires returned	309	91.96
Questionnaires not returned	27	8.04
Total	292	86.9

Table 4.2 Response rate in terms of colleges

No	College Name	Frequency	Percent
1	College of Natural Science	29	9.9
2	Institute of Technology	59	20.2
3	College of Public Health and Medical Science	61	20.9
4	Institute of Education and Professional Development	9	3.1
5	College of Agricultural and Veterinary Medicine	25	8.6
6	College of social science and law	15	5.1
7	College of Business and Economics	13	4.5
8	Administrative Offices	79	27.7
	Total	292	100.0

4.1.2 Socio Demographic Data

Table 4.3 Socio Demographic data of JU staff

Respondent profile	Items	N	Percentage
Sex	Male	231	79.1
	Female	61	20.9
	Total	292	100
Age group	≤25 years	87	29.8
	26-35 years	158	54.1
	36-45 years	39	13.4
	46-55 years	7	2.4
	≥56 years	1	0.3
	Total	**292**	**100**
Staff category	Academic	213	72.9
	Administrative	79	27.1
	Total	292	100
Academic status	BA/BSc Degree	133	45.5
	Masters Degree	138	47.3
	Doctorate Degree(PhD)	10	3.4
	MD	7	2.4
	DVM	4	1.4
	Total	292	100
Academic Rank	Assistant lecturer	38	17.8
	Graduate assistant	26	12.2
	Lecturer	135	63.4
	Assistant professor	10	4.7
	Associate professor	2	0.9
	Professor	2	0.9
	Total	213	100

As shown in table 4.3 the majority of the respondents were male (79 %) and 20.9% were female. As far as age group is concerned 54.1% were in the range of 26-35 years, 29.8% were ≤25 years and ≥56 years were 0.3%. The highest number of respondents were academic staff (72.9%) and those

with Masters Degree were (47.3%) followed by BSc Degree holders, 45%. Regarding the academic status of the respondents, 63.4% were lecturer followed by assistant lecturer (17.8%).

4.1.3a Knowledge management facilities

One of the main objectives of this study was assessing KM opportunities in JU and to what extent JU staff and the university management understand and using these opportunities for organizational competitiveness. The respondents' level of agreement on the statements that measure KM opportunities is table 4.4. The items were measured on five point using percent and mean score. As a guideline to interpret the perception mean score of JU staff that indicate the level of agreement on items that measure KM opportunities of JU in place and a mean score was considered **strongly Disagreed (SD)**, if it falls within the range of 1.0 − 1.8, a mean score 1.80– 2.6 was taken as **Disagreed(D)** and from 2.6 − 3.4 was considered **Neutral (N),** the range from 3.4 -4.2 was taken **Agreed** (A) and from 4.2 -5.0 was considered **Strongly Agreed (SA)**

Table 4.4 Knowledge Management facilities

Statements on KM facilities	SA	A	N	D	SD	Staff category	X	SD	Decision
1. Staff do have office computer	57.9%	32.9%	2.1%	3.8%	3.4%	ACS(213) ADS(79)	4.39 4.34	0.97 0.91	SA SA
2.Staff do have internet connectivity helps to broaden individual knowledge	45.2%	41.4%	5.1	3.8%	4.5%	ACS(213) ADS(79)	4.24 4.06	0.96 1.13	SA A
3. JU has Video conferencing system helps for knowledge sharing	9.9%	12.0%	19.9%	22.6%	35.6%	ACS(213) ADS(79)	1.99 3.44	1.14 1.25	D A
4. The university do have collaborative tools that allows communication with groups	7.9%	20.5%	20.9%	29.5%	21.2?%	ACS(213) ADS(79)	2.36 3.42	1.16 1.12	D A
5. There are enough halls where staff can meet and exchange knowledge/experience	6.5%	14.0%	29.1%	25.3%	25.0%	ACS(213) ADS(79)	2.24 3.25	1.11 1.10	D N
6. There is an Intranet(local network) that helps to share staff experience of knowing where to find information from other members in JU	15.8%	27.1%	21.2%	20.5%	15.4%	ACS(213) ADS(79)	2.84 3.71	1.29 1.17	D A
7. JU has library that equipped with enough books ,journals, lecture note	11.3%	30.5%	32.5%	22.3%	3.4%	ACS(213) ADS(79)	3.08 3.68	0.97 1.06	N A
8. JU library has databases and Internet connectivity to download materials	10.3%	27.1%	37.0%	19.5%	6.2%	ACS(213) ADS(79)	3.05 3.46	0.95 1.25	N A
9.There are knowledge documentation such as report and databases that can be accessed by the staff in JU	6.5%	17.8%	53.4%	16.8%	5.5%	ACS(213) ADS(79)	2.97 3.20	0.83 1.09	N N
10. JU has knowledge networks such as (e-mail, wiki, forum) for knowledge management	9.2%	31.8%	29.1%	19.9%	9.9%	ACS(213) ADS(79)	3.02 3.42	1.12 1.10	N A

Statement	SA	A	N	D	SD	Staff	X	SD	Remark
11. Jimma University has up-to-date hand books which are frequently used	13%	30.5%	30.5%	13.4%	12.7%	ACS(213) ADS(79)	3.19 3.15	1.23 1.11	N N
12. Jimma University has up-to-date teaching materials which are frequently used	7.5%	30.8%	29.1%	20.5%	12.0%	ACS(213) ADS(79)	2.98 3.11	1.15 1.09	N N
13. Jimma University has up-to-date work guide lines which are frequently used	7.5%	27.7%	27.4%	19.9%	17.5%	ACS(213) ADS(79)	2.77 3.18	1.26 1.04	N N

Key   **X** = Mean   **SD** = standard Deviation   **SA** = strongly agreed   **A** = agreed
D = Disagreed   **SD** = strongly Disagreed ADS (79) = Administrative staff and 79 in number
ACS (213) = Academic staff and 213 in number

As shown in the table 4.4 above, using items analysis for responses by academic and administrative staffs; majority of the respondents on KM opportunities indicated strongly agreed and agreed on the availability of office computers (57.9%,32.9%), and internet connectivity (45.2%,41.4%). As can be seen from table 4.4, academic staff strongly agreed on the availability of computers and internet connectivity that helps to broaden individual knowledge and share with other people. Similarly administrative staff indicated strongly agreed and agreed on the availability of office computer and internet connectivity respectively. In addition, respondents indicated neutral, agreed and disagreed (32.5%, 30.5% and 22.3% respectively) on availability of library that equipped with enough books ,journals, lecture note and availability of library that has databases and Internet connectivity to download materials (37.0%, 27.1% and 19.5% respectively), and availability of up-to-date hand books which are frequently used (30.5%,30.5% and 13.4% respectively). Respondents also indicated agreed, neutral and disagreed on availability of up-to-date work guide lines which are frequently used(27.7%, 27.4% and 19.9% respectively) and availability of up-to-date teaching materials which are frequently used(30.8%,29.1% and 20.5% respectively).

On the other hand, respondents indicated disagreement on the statements that measure knowledge management opportunities. Result of the study revealed that respondents from administrative staff agreed and academic staff disagreed on using video conferencing for knowledge sharing availability of collaborative tools for communication with groups in JU. The respondents also indicated strongly disagreed (25.0%) and disagreed (25.3%) on place where staff can meet and socialize or share tacit knowledge and experience. As to the use of intranet to share knowledge, library

database, knowledge networks such as e-mail and wiki, up-to-date teaching materials the score is almost similar (see table 4.4).

4.1.3b Interviews and observation analysis on types and effectiveness of using KM opportunities for organizational competitiveness

As highlighted in chapter three of this thesis, it was considered necessary to carry out interviews with deans and office directors in order to complement the results obtained from quantitative data which were presented in above section. The respondents consisted of three college deans and six office directors.

The result of interview shows that all the office holders are working to achieve the university's goal and vision and sustain the University competitiveness. They were in agreement that JU has facilities such as computers, good Internet connection and Library database and e-resources that facilitate knowledge management practices namely knowledge acquisition, knowledge creation, knowledge documentation, knowledge sharing and apply knowledge. In addition to these, skilled human capital is the major KM opportunity in JU. But competences and skills like communication and information literacy are very essential to use opportunities for organizational competitiveness.

Some of the respondents who participated in the interview do not understand KM and knowledge management practices. One of the respondents said that "knowledge resides in the peoples' mind and how it could be managed?" Such a question is not surprising because KM is a new concept.

Another interviewee stated that "*as higher education we are working with knowledge and knowledge acquisition knowledge creation and knowledge application are some common KM practices in our college. In my opinion we have limitations in creating platform to share knowledge gained among staff, disseminate new research works and document things for future use. We have many knowledge management opportunities relative to others organizations in Ethiopia. For example we have high bandwidth for Internet connection, every staff has computer with Internet connection, Library resources including both hard copy and e-resources. But, in my opinion these resources are under utilized for many reasons*". Respondents indicated that they rarely use the library to access library resources for knowledge acquisition.

One of the respondents said that "*to facilitate KM practices in JU there are a number of opportunities available. The availability of resources is a good opportunity and people constitute the most important resource that JU has.*"

Another respondent remarked that "*trainings, library resources (journals and books) and using internet are means of acquiring knowledge in JU. Supervision (research supervision and internship supervision), lectures, community outreach (mostly Public and Medical Science College) and consultancy are some of the activities related to knowledge application have* done".

Observation is another method of qualitative data collection in this study as indicated in chapter three. In addition to the results presented above, observation, review of documents and consulting websites revealed that JU has numbers of KM opportunities.

Some of these opportunities are high capacity network, high bandwidth, and video conferencing facilities in the university, which are not yet used to fullest potential. There are video conferencing terminals and recording systems in JU. But these modern technologies are used only for simple tasks except two colleges that take initiative by using video conferencing for teaching /learning two masters programs (Institute of Technology) and some students share knowledge and their culture with students overseas (College of Public Health and Medical Science).

The result of consulting JU website and review of documents revealed that external links and projects are KM opportunities for JU on top of Library resources and technological opportunities. As stated in strategic plan of JU, the university strategically working to expand and effective management of collaborative partnerships and linkages to enhance service provision, creation, sharing, preservation and dissemination of knowledge and experiences (JU strategic plan, 2011). Currently JU is a full member of the international network towards unity for health. It has also institutional relationships and co-operation with Universities and research institutions in other part of the world.

All these Institutional University Cooperation programs and projects play great role in capacitating the workers and the University at large. For example Dr. Fikre the President of JU confirmed that the contribution JU-VLIR-IUC Partner Project on the 2nd Phase of JU-VLIR-IUC Partner Project launching ceremony that held on March 30, 2013 and said that*" the contribution of the project in capacity building was hugely significant so much so that the motto "Sharing minds, changing lives" was translated into action*". Ambassador Hugues Chantry in his speech on the ceremony

appreciated the achievement of the program so far and said: "*It is wrong to stop the formula that worked correctly, the formula that brought together professors and students from North and South*".

Interview respondents have the same feeling on the role of projects and external links in JU. But one interviewee remarked that" *JU has benefited from projects and external links. Although many projects and links undertaken in JU with different organizations, it seems not inclusive in participating all concerned staff in the projects and build the capacity of staff.*"

However, considering the quantitative data analysis of 4.1.3a above, the mean (X), standard deviation (SD) and at the decision columns of the table 4.4 above, both respondents (academic and administrative staffs) strongly agreed office computers were put in place. Academic staffs strongly agreed but administrative indicated agreement on internet connectivity. The academic staff's response on this item could be the heavy use of the internet for teaching materials. Nonetheless, most respondents (academic and administrative staffs) were neutral/undecided on most of the facilities put in place for individual and organizational competitiveness, these facilities; the researcher believes and considers that they could serve as knowledge management opportunities and effectiveness for individual and organizational competitiveness.

Answering the research question number one on types and effectiveness of Knowledge management opportunities (KMO) put in place for JU categories of staff for individual and organizational competitiveness and using the decision column, the researcher agreed that both academic and administrative staffs variously agreed on the following facilities: office computer, internet connectivity, library, databases and Internet connectivity, knowledge documentation (i.e. report and databases), knowledge networks (e-mail, wiki, forum), up-to-date hand books, up-to-date teaching materials and up-to-date work guidelines were the types and effective Knowledge management facilities and which are opportunities put in place for effective individual and organizational competitiveness. But they were not in agreement on video conferencing system, collaborative tools, enough halls, Intranet (local network) because academic staffs disagree that the items/facilities constitute KMO and effectiveness for organizational competitiveness; although, the items were agreed by administrative staffs. However, this disagreement by the academic staff might be as a result of none use of the facilities but the administrative staff could be said to be in constant use of the facilities such as: video conferencing to conduct interviews, collaborative tools such office telephones for communications and halls for meetings or conferences.

Using T-test analysis on the types and effectiveness of KM facilities put in place for KMO for academic and administrative staffs and organizational competitiveness at 2-tailed level of significance with p=0.05 is presented in table 4.5 below. The table shows the KM facilities put in place in JU, administrative staff (ADS) and academic staff (ACS) respondents. The decision was statistically significant (SS) or not statistically significant (NSS) between the groups.

Table 4.5 T-test comparison of Administrative and academic staffs on Knowledge Management facilities at Level of significance p=0.05

Statements related KM facilities	Staff category	Respondents	Sig. (2-tailed)	Decision
1. Staff do have office computer	ACS ADS	213 79	0.68	NSS
2. Staff do have internet connectivity helps to broaden individual knowledge	ACS ADS	213 79	0.19	NSS
3. JU has Video conferencing system helps for knowledge sharing	ACS ADS	213 79	.000	SS
4. The university do have collaborative tools that allows communication with groups	ACS ADS	213 79	.000	SS
5. There are enough halls where staff can meet and exchange knowledge/experience	ACS ADS	213 79	.000	SS
6. There is an Intranet(local network) that helps to share staff experience of knowing where to find information from other members in JU	ACS ADS	213 79	.000	SS
7. JU has library that equipped with enough books ,journals, lecture note	ACS ADS	213 79	.000	SS
8. JU library has databases and Internet connectivity to download materials	ACS ADS	213 79	.003	SS
9. There are knowledge documentation such as report and databases that can be accessed by the staff in JU	ACS ADS	213 79	.049	SS
10. JU has knowledge networks such as (e-mail, wiki, forum) for knowledge management	ACS ADS	213 79	.003	SS
11. Jimma University has up-to-date hand books which are frequently used	ACS ADS	213 79	0.82	NSS
12. Jimma University has up-to-date teaching materials which are frequently used	ACS ADS	213 79	0.36	NSS
13. Jimma University has up-to-date work guide lines which are frequently used	ACS ADS	213 79	0.01	SS

As can be seen from table 4.5 that show the t-test comparison between administrative and academic staffs on the thirteen (13) items of the KM facilities put in place by JU. The result of the t-test comparison showed statistical significant on nine (9) items with no significant difference on four (4) items. Hence, we reject the null hypotheses and accept alternative hypothesis at $p<0.05$ on the 9 items whose p-value were between $p=0.000 - 0.049$ (ie. items: 3, 4, 5, 6, 7, 8, 9, 10 and 13) and conclude that there is significant difference on knowledge management opportunities and effectiveness of using Knowledge management opportunities put in place for JU categories of staff for individuals and organizational competitiveness. But on the other hand, we accept the null hypotheses at $p>0.05$ on the 4 items whose p-value were between $p=0.19 - 0.68$ (i.e items 1, 2, 11 and 12) and conclude that there is no significant difference on the types and effectiveness of Knowledge management opportunities put in place for JU categories of staff for individuals and organizational competitiveness.

Our result therefore on the hypothesis showed that majority of the types of KMF put in place by the JU for KMO and effectiveness of individuals and organizational competitiveness were significant and should be improved for effective usage of opportunities for academic and administrative staffs and organizational competitiveness.

4.1.4 Knowledge Management Barriers

4.1.4.1 Organization related barriers

Another objective of this study was assessing organizational related barriers that hinder knowledge management in JU and to what extent JU understand these factors impacting the University's knowledge management practices. The respondents' level of agreement on the statements that measure organizational KM factors is presented in Table 4.6. The items were measured on five point using percent and mean score. As a guideline to interpret the attitude mean score of JU staff that indicate the level of agreement on items that measure organizational related factors of KM of JU and a mean score was considered **strongly Disagreed (SD)**, if it falls within the range of 1.0 – 1.8, a mean score 1.80– 2.6 was taken as **Disagreed(D)** and from 2.6 – 3.4 was considered **Neutral (N),** the range from 3.4 -4.2 was taken **Agreed** (A) and from 4.2 -5.0 was considered **Strongly Agreed (SA).**

Table 4.6 Organization related barriers

Statements on organizational related barriers of KM in JU	SA	A	N	D	SD	Staff category	X	SD	Decision
JU knowledge management is aligned with organizational goals and business strategy of university	7.9%	44.2%	31.8%	12.3%	3.8%	ACS(213) ADS(79)	3.30 3.68	0.89 0.99	N A
Jimma University allocates adequate resources to support knowledge management with the latest technologies	8.6%	24.7%	25.3%	24.3%	17.1%	ACS(213) ADS(79)	2.69 2.83	1.26 1.22	N N
There are regular trainings and conferences that enhance the knowledge acquisition of individuals in JU	2.4%	23.6%	19.9%	26.0%	28.1%	ACS(213) ADS(79)	2.33 2.11	1.23 1.19	D D
There are structured platform of knowledge transfer such as forum, workshop, conferences, team teaching/working and joint projects in JU	5.5%	28.1%	20.2%	20.2%	26.0%	ACS(213) ADS(79)	2.52 3.08	1.29 1.28	D N
Jimma University makes effort to collaborate staff with external professional networks	6.2%	26.7%	30.8%	23.3%	13.0%	ACS(213) ADS(79)	2.76 3.28	1.04 1.12	N N
Jimma University makes effort to collaborate staff with external professional	5.5%	18.5%	41.4%	24.3%	10.3%	ACS(213) ADS(79)	2.70 3.23	0.94 1.02	

associations									
Jimma university value knowledge shared by staff	3.4%	23.3%	36.6%	18.5%	18.2%	ACS(213) ADS(79)	2.64 3.05	1.14 1.11	N N
There are motivation and reward system for knowledge management in JU	3.4%	15.1%	22.6%	19.2%	39.7%	ACS(213) ADS(79)	1.19 2.11	1.13 1.22	D D
The organizational structure of Jimma University is conducive for dedicated knowledge management	6.2%	22.6%	42.8%	18.8%	9.6%	ACS(213) ADS(79)	2.88 3.41	0.98 1.02	N A
specific knowledge and skills of individuals have been documented in JU	4.1%	13.4%	26.0%	36.0%	20.5%	ACS(213) ADS(79)	2.31 2.45	1.04 1.08	D D
There is knowledge management office and staff in Jimma University	3.4%	11.3%	29.8%	26.4%	29.1%	ACS(213) ADS(79)	2.29 2.44	2.44 1.06	D D
ICT trainings are provided for staff in JU	22.3%	14.7%	36.0%	15.4%	11.6%	ACS(213) ADS(79)	3.0 3.75	1.22 1.25	N A
Regular meetings are organized for professional matters in offices	5.5%	20.5%	21.2%	32.2%	20.5%	ACS(213) ADS(79)	2.44 2.96	1.21 1.02	D N
Staff are supported for creating explicit knowledge (write down or produce documents) and the methods they use in step-by-step description	4.5%	14.0%	25.0%	43.2%	13.4%	ACS(213) ADS(79)	2.31 2.55	0.97 0.99	D D
ICT services in Jimma University is satisfactory	17.8%	55.1%	12.3%	9.9%	4.8%	ACS(213) ADS(79)	3.68 3.78	0.96 1.19	A A
There is clear university wide guide line as what/when/how/ho	4.5%	9.9%	20.2%	44.2%	21.2%	ACS(213) ADS(79)	2.14 2.55	0.97 1.12	D D

						X	SD	
w much knowledge to share								
New employees attend induction training in jimma university	19.5%	32.9%	23.3%	14.7%	9.6%	ACS(213) ADS(79)	3.47 3.14	1.25 1.13	A N
New members of staff are assigned to mentors who help them to find their way in the organization	6.8%	19.9%	20.5%	31.5%	21.2%	ACS(213) ADS(79)	2.41 2.54	1.19 1.16	D D

Key
X = Mean   **SD** = standard Deviation   **SA** = strongly agreed   **A** = agreed   **D** = Disagreed   **SD** = strongly Disagreed   **ACS (213)** = academic staff and 213 in number   **ADS (79)** = administrative staff and 79 in number

As presented in Table 4.6, 44.2%, 31.8% and 12.3% of the respondents indicated agree, neutral and disagree respectively on the alignment of KM strategy with JU's business strategy. Result of this study also revealed that the University does not make enough efforts to facilitate trainings and conferences that enhance knowledge acquisition of individuals in JU, whereby (28.1% strongly disagree and 26.0% disagree that University does so). Similarly, it seems that there is Lack of structured platform of knowledge transfer such as forum, workshop, conferences, team teaching/working and joint projects in JU in which staff socializes, and share knowledge as 28.1%,26.0% and 20.2% of the respondents agree, strongly disagree and disagree respectively with the presence of such platforms. In addition to these, there is insufficient of efforts by the University to collaborate staff with external professional networks and associations in which staff acquires new knowledge from external sources (30.8% neutral, 26.7% agree and 23.3% disagree).

Another important finding of the study is 44.2% of the respondents disagreed and 21.2% strongly disagreed that in JU, there is no university wide guide line as what knowledge to share, when to share, how to share and how much knowledge to share to protect the organizational knowledge. The result of this study also revealed that lack of motivation and reward system to improve knowledge management practices in JU is quite high documenting knowledge and skills of individuals and support staff to take time and document the knowledge that resides in individual heads (tacit knowledge) and knowledge in the work processes. Surprisingly, departments and

offices in JU have no regular meetings that are organized for professional matters, according to 52.7% of the respondents. Valuing knowledge shared by staff is another point that respondents indicated neutral, agreement, disagreement and strongly disagreement (36.6%, 23.3%, 18.5% and 18.2% respectively). There is no knowledge management office and responsible body that map all knowledge networks in the university with a score of 29.8% neutral, 29.1% strongly disagree and 26.4% disagree.

On the other hand according to the result obtained, 55.1% of the respondents agreed and 17.8% of the respondents strongly agreed that ICT services in JU are satisfactory.

The attitude of administrative and academic staff on organizational factors of KM for individual and organizational competitiveness was analyzed and presented in table 4.7 using t-cal and t-crit. The table shows the items to measure the organizational related factors of KM in JU, administrative staff (ADS) and academic staff (ACS) respondents and the decision either the mean difference between the two groups statistically significant (SS) or not statistically significant (NSS).

Table 4.7 T-test comparison of Administrative and academic staff's attitude on organizational related barriers of Knowledge Management

Statements on organizational related to barriers of KM in JU	Staff category	Respondents	Sig	Sig. (2-tailed)	Decision
JU knowledge management is aligned with organizational goals and business strategy of university	ACS ADS	213 79	.386	.002	SS
Jimma University allocates adequate resources to support knowledge management with the latest technologies	ACS ADS	213 79	.000	.001	SS
There are regular trainings and conferences that enhance the knowledge acquisition of individuals in JU	ACS ADS	213 79	.001	.002	SS
There are structured platform of knowledge transfer such as forum, workshop, conferences, team teaching/working and joint projects in JU	ACS ADS	213 79	010	.001	SS
Jimma University makes effort to collaborate staff with external professional networks	ACS ADS	213 79	.000	.000	SS

Statement	Group	N			
Jimma University makes effort to collaborate staff with external professional associations	ACS ADS	213 79	.005	.000	SS
Jimma university value knowledge shared by staff	ACS ADS	213 79	.001	.005	SS
The organizational structure of Jimma University is conducive for dedicated knowledge management	ACS ADS	213 79	.081	.012	SS
specific knowledge and skills of individuals have been documented in JU	ACS ADS	213 79	.424	.000	SS
There is knowledge management office and staff in Jimma University	ACS ADS	213 79	.398	.000	SS
ICT trainings are provided for staff in JU	ACS ADS	213 79	.100	.000	SS
Regular meetings are organized for professional matters in offices	ACS ADS	213 79	.001	.001	SS
Staff are supported for creating explicit knowledge (write down or produce documents) and the methods they use in step-by-step description	ACS ADS	213 79	.713	.000	SS
ICT services in Jimma University is satisfactory	ACS ADS	213 79	.008	.463	NSS
There is clear university wide guide line as what/when/how/how much knowledge to share	ACS ADS	213 79	.001	.000	SS
New employees attend induction training in jimma university	ACS ADS	213 79	.141	.041	SS
New members of staff are assigned to mentors who help them to find their way in the organization	ACS ADS	213 79	.635	.000	SS
There are motivation and reward system for knowledge management in JU	ACS ADS	213 79	.130	.000	SS

Table 4.7 shows the t-test comparison between administrative and academic staff using eighteen (18) items that measure organizational related factors of KM in JU. The t-test comparison between

the administrative staff and academic staff's attitude were statistically significant on seventeen (17) items and not statistically significant on one (1) items. Therefore, the attitude of administrative and academic staff on most of the organizational related factors of KM in JU on individual and organizational competitiveness were different. The result of the t-test comparison showed statistical significant on nine (17) items with no significant difference on four (1) items. Hence, we reject the null hypotheses and accept alternative hypothesis at p<0.05 on the 17 items whose p-value were between p=0.000 – 0.049 and conclude that there is significant difference on organizational related knowledge management barriers for JU categories of staff for individuals and organizational competitiveness. But on the other hand, we accept the null hypotheses at p>0.05 on the 1 items whose p-value were between p=0.19 – 0.68 and conclude that there is significant difference on organizational related barriers of Knowledge management for JU categories of staff for individuals and organizational competitiveness.

Our result therefore on the hypothesis showed that majority of the types of organizational related barriers of knowledge management for organizational competitiveness were significant and should be alleviated for academic and administrative staffs and organizational competitiveness.

Coming to the interview result on organizational related factors, it revealed that, JU allocates adequate resources to expand and update ICT infrastructure to support teaching/learning and services. But these high capacity infrastructure and services are not put in to full-fledged usage. One respondent for instance stated that "*there are no any platforms in JU in which new members of staff are assigned mentors who help them to find their way in the university and share knowledge and experiences*" and other respondents indicated the same feeling on the availability of such platforms.

The result also revealed that, there is not alignment of KM strategy with JU business strategy in JU. One of the respondents stated that: "*As far as I know there is no clearly stated university wide KM strategy and aligned to the business strategy of the University*". Similarly another interviewee said that   *I don't think we have KM strategy that aligned with our business strategy because as to me KM is a new concept and we are not familiar with the knowledge management practices. The University allocates resources to update technologies but I am not sure If it is in line with KM practices. For instance the University is investing on a Management Information System (MIS) that provides information that the University require to manage itself efficiently and effectively. When this system put in to full usage it will be used for managing hardware, Software, data (information*

for decision making), procedures(development and documentation), and above all People (individuals and groups) "

Lack of trainings and conferences that enhance the knowledge acquisition of individuals which increases the competitiveness of staff is another critical issue in JU. In this regard most of the respondents said there is a chance to get long term education (Masters and PhD programs) for academic staff but short term trainings, workshops and conferences that enhance the acquisition of the staff are rare. For administrative workers there is little chance to update their knowledge. On the other hand very few offices have planned to provide trainings for their staff using local experts and by cooperating with external organizations and professional networks.

According to the interviewees who participated in this study, documenting specific knowledge and skills of individuals (knowledge documentation) in JU is poor. Colleges, institutes and administrative offices do not support or facilitate for staff to write down the knowledge that lies in their mind and in the process. Only one office, which is ICT Development office use a documentation system(wiki) that helps all staff in the office to share knowledge obtained from trainings, workshops and the staff developing good attitude towards knowledge sharing. In relation to this, there are not motivation and reward systems for staff to create, document, share and apply knowledge. In addition there is no stated guide line what/when/how/how much knowledge to share to protect organizational knowledge of JU.

4.1.4.2 People related barriers

This section is to assess people related factors that hinder knowledge management in JU and to what extent JU staff understand these factors impacting the individual as well as University's knowledge management practices. The respondents' level of agreement on the statements that measure people related factors of KM is presented in Table 4.8

Table 4.8 People related barriers of KM

Statements on people related barriers	SA	A	N	D	SD	Staff category	X	SD	Decision
Knowledge sharing is strength and knowledge hoarding(not sharing) is a weakness	52.1%	18.8%	11.0%	12.7%	5.5%	ACS(213)	4.20	1.26	SA
						ADS(79)	3.58	1.24	A
Jimma university staff are good in sharing knowledge after attending trainings	5.1%	19.2%	27.7%	23.6%	24.3%	ACS(213)	2.33	1.13	D
						ADS(79)	3.20	1.14	N
Jimma university staff are good in disseminating research findings to the university staff and community surrounding	7.5%	22.6%	19.5%	33.6%	16.8%	ACS(213)	2.47	1.12	D
						ADS(79)	2.71	1.21	N
Staff use intranet and Internet for work related tasks to increase their productivity	12.3%	36.3%	16.8%	18.2%	16.4%	ACS(213)	2.89	1.30	N
						ADS(79)	3.10	1.30	N
Jimma University staff trust each other to share knowledge	5.1%	18.5%	33.2%	18.2%	25.0%	ACS(213)	2.39	1.19	D
						ADS(79)	2.60	1.00	N
There is sufficient individual motivation to share knowledge in JU	3.8%	13.4%	30.5%	26.4%	26.0%	ACS(213)	2.26	1.14	D
						ADS(79)	2.53	1.12	D

Statement						Group	Mean	SD	Decision
Jimma University staff do not have time to organize and share knowledge with others	4.5%	24.3%	18.5%	19.2%	33.6%	ACS(213)	2.30	1.27	D
						ADS(79)	2.44	0.96	D
job rotation allows knowledge sharing	22.3%	32.9%	17.8%	16.4%	10.6%	ACS(213)	3.40	1.34	A
						ADS(79)	3.48	1.13	A
Language skill hampers Knowledge sharing and creation of staff	7.5%	47.3%	26.7%	12.7%	5.8%	ACS(213)	3.44	0.96	A
						ADS(79)	3.62	3.74	A
ICT skill hampers the knowledge creation and sharing of staff	16.1%	55.1%	12.7%	10.3%	5.8%	ACS(213)	3.74	0.96	A
						ADS(79)	3.42	1.26	A
Exposure to technologies impacts the knowledge creation and sharing of staff	22.6%	51.4%	13.7%	9.6%	2.7%	ACS(213)	3.98	0.88	A
						ADS(79)	3.40	1.10	A
Incentive increases the contribution of staff in sharing obtained knowledge and creating new knowledge	18.8%	56.2%	15.1%	4.5%	5.5%	ACS(213)	3.87	0.92	A
						ADS(79)	3.54	1.11	A
Much knowledge is distributed in informal ways	5.1%	19.9%	21.6%	29.8%	23.6%	ACS(213)	2.39	1.21	D
						ADS(79)	2.91	1.08	N
ICT technologies foster JU competitiveness in knowledge sharing	22.3%	55.1%	11.3%	7.5%	3.8%	ACS(213)	3.88	0.95	A
						ADS(79)	3.75	1.04	A
ICT makes contribution to acquire knowledge	30.8%	54.8%	7.9%	4.5%	2.1%	ACS(213)	4.08	0.86	A
						ADS(79)	4.06	0.88	A

As presented in 4.8, majority of the respondents, 52.1% strongly agreed and 18.8% agreed that JU staff believe knowledge sharing is strength. But the respondents indicated that the staffs have no good knowledge sharing practices. On the other hand, 30.5%, 26.6% and 26.0% of the respondents indicated neutral, disagree and strongly disagree with sufficient individual motivation to share

knowledge and 33.2%, 25.0% and 18.2% neutral, strongly disagreed and disagreed trust among staff to share knowledge respectively, Whereas the remaining were agreed on the issue.

The respondents indicated agreement on the factors that impact the knowledge management practices, namely language skill (47.3%),ICT skill (55.1%),exposure to technologies (51.4%) and incentive increases the contribution of staff in sharing obtained knowledge and creating new knowledge is quit high(56.2%). ICT technologies foster JU competitiveness in knowledge sharing and it makes contribution to acquire knowledge being the high score (55.1 %). Whereas the remaining were indicated strongly agreed, neutral and disagreed and strongly disagreed on the issue.

The attitude of administrative and academic staff on people related factors of KM for individual and organizational competitiveness was analyzed and presented in table 4.9 using t-cal and t-crit. The table shows the items to measure the people related factors of KM in JU, administrative staff (ADS) and academic staff (ACS) respondents and the decision either the mean difference between the two groups statistically significant (SS) or not statistically significant (NSS).

Table 4.9 T-test comparison of Administrative and academic staff's attitude on people related factors of Knowledge Management in JU

Statements on people related factors of KM	Staff category	Respondents	Sig.	Sig. (2-tailed)	Decision
Knowledge sharing is strength and knowledge hoarding(not sharing) is a weakness	ACS ADS	213 79	.904	.001	SS
Jimma university staff are good in sharing knowledge after attending trainings	ACS ADS	213 79	.583	.000	SS
Jimma university staff are good in disseminating research findings to the university staff and community surrounding	ACS ADS	213 79	.503	.000	SS
Staff use intranet and Internet for work related tasks to increase their productivity	ACS ADS	213 79	.008	.000	SS
Jimma University staff trust each other to share knowledge	ACS ADS	213 79	.000	.000	SS
There is sufficient individual motivation to share knowledge in JU	ACS ADS	213 79	.002	.000	SS
Jimma University staff do not have time to organize and share knowledge with others	ACS ADS	213 79	.207	.000	SS
job rotation allows knowledge sharing	ACS ADS	213 79	.057	.062	NSS
Language skill hampers Knowledge sharing and creation of staff	ACS ADS	213 79	.200	.085	NSS
ICT skill hampers the knowledge creation and sharing of staff	ACS ADS	213 79	.000	.019	SS
Exposure to technologies impacts the knowledge creation and sharing of staff	ACS ADS	213 79	.000	.000	SS
Incentive increases the contribution of staff in sharing obtained knowledge and creating new knowledge	ACS ADS	213 79	.000	.011	SS
Much knowledge is distributed in informal ways	ACS ADS	213 79	.010	.001	SS
ICT technologies foster JU competitiveness in knowledge sharing	ACS ADS	213 79	.012	.292	NSS
ICT makes contribution to acquire knowledge	ACS ADS	213 79	.439	.852	NSS

Table 4.9 shows that the t-test comparison between administrative and academic staff using eighteen (15) items that measure people related factors of KM in JU. The t-test comparison between the administrative staff and academic staff's attitude were statistically significant on eleven (11) items and not statistically significant on one (4) items. Therefore, the attitude of administrative and academic staff on most of the people related factors of KM in JU on individual and organizational competitiveness were statistically significant. Therefore, the attitude of administrative and academic staff on most of the people related factors of KM in JU on individual and organizational competitiveness were different. The result of the t-test comparison showed statistical significant on nine (11) items with no significant difference on four (4) items. Hence, we reject the null hypotheses and accept alternative hypothesis at $p<0.05$ on the 11 items whose p-value were between $p=0.000 - 0.049$ and conclude that there is significant difference on people related knowledge management barriers for JU categories of staff for individuals and organizational competitiveness. But on the other hand, we accept the null hypotheses at $p>0.05$ on the 4 items whose p-value were between $p=0.19 - 0.68$ and conclude that there is significant difference on organizational related barriers of Knowledge management for JU categories of staff for individuals and organizational competitiveness.

Our result therefore on the hypothesis showed that majority of the types of people related barriers of knowledge management for organizational competitiveness were significant and should be alleviated for academic and administrative staffs and organizational competitiveness.

The interviewees, when asked to describe barriers of knowledge management practices in JU, their efforts in strengthening the knowledge sharing culture and what should the University do to improve knowledge management practices. One of the respondents said: "E*ven if most of the staffs understand the benefit of knowledge management practices for individual and organizational competitiveness they are reluctant to contribute. Knowledge sharing involves people and changing people's attitude is not such easy task"*.

Another respondent highlighted that "*The behaviour of individuals highly affect the knowledge practices. For instance we managers in the highest hierarchy of the University must be good role model by sharing our knowledge and experiences to our subordinates to sustain and adapt to the changing world. The human factor is the key factor or resource so that we have to understand this and work on to create conducive knowledge sharing environment for subordinates and plan to build their capacity. Some employees may not understand what knowledge management or knowledge sharing is. As to me this is a big challenge and changing this and related issues is changing the organization"*

Some issues related to trust were identified during the interview session. The first issue is most of the people do not trust the capability of the staff willing to share their knowledge for individual and organizational competitiveness. Respondents observed that employees do not trust each other with information/knowledge sharing without acknowledging their work.

Interviewees identified job protection as another factor impacting knowledge management practices. This is because employees accepted the argument that "If I shared what I know / knowledge I will be replaced by someone else". Colleagues suspect if there are hidden agendas and prefer hoarding their knowledge. They identified as English language being second language of JU staff it has some impacts on knowledge management activities. Almost all respondents agreed that employees' ICT skill is one of the factors impacting knowledge management practices in JU.

Research question number two is answered on types of Knowledge management barriers (KMB) of JU that impede individual and organizational competitiveness and using the decision column, the researcher agreed that both academic and administrative staffs variously agreed on the following KMB (organizational and people related barriers): Knowledge sharing is strength and knowledge hoarding(not sharing) is a weakness, job rotation allows knowledge sharing, Language skill , ICT

skill and Exposure to technologies hampers Knowledge sharing and creation of staff, Incentive increases the contribution of staff in sharing obtained knowledge and creating new knowledge, ICT technologies foster JU competitiveness in knowledge sharing, ICT makes contribution to acquire knowledge, ICT services in JU is satisfactory .Alignment of KM strategy with JU business strategy, the conduciveness of JU organization structure for dedicated KM, provided ICT training for staff are items that were agreed by administrative staff. The disagreement of academic staff on these items might comes from lack of aligned KM strategy with business strategy, as organizational structure is not convenient for dedicated KM and ICT trainings were not provided to academic staff.

But they were not in agreement on sharing knowledge after attending trainings, disseminating research findings, trust each other to share knowledge, sufficient individual motivation to share knowledge, staff do not have time to organize and share knowledge with others, availability of regular trainings and conferences that enhance the knowledge acquisition, availability of structured platform of knowledge transfer such as forum, workshop, conferences, team teaching/working and joint projects, motivation and reward system for knowledge management ,documenting specific knowledge and skills of individuals, availability of knowledge management office and staff, organizing meetings for professional matters, supporting staff for creating explicit knowledge (write down or produce documents) and the methods they use in step-by-step description, availability of university wide guide line as what/when/how/how much knowledge to share, Mentoring system that help new staff to find their way in the organization because all staffs disagree that the items/barriers constitute KMB of JU for individual and organizational competitiveness. This is as a result lack of understanding of advantages of KM practices in the University for individual and organizational competitive advantages.

The result therefore on the hypothesis showed that majority of the types of KMB in JU that impedes effectiveness of individuals and organizational competitiveness were significant and should be planned in a way these barriers alleviated to have good KM practices that improve and sustain the staffs and organizational competitiveness.

4. 2. Discussion of findings

4.2.1 Introduction

The main aim of this study was to assess the opportunities and barriers of KM for organizational competitiveness. The previous three chapters and the result section of this chapter of this thesis presented both quantitative and qualitative analysis and results from questionnaire, responses of interviewee and observation. This section discusses the results found using methods discussed in chapter three. First to be presented is the discussion on the KM opportunities and the extent to which JU uses the KM opportunities in place. This is followed by KM barriers in JU. Finally, this section takes the discussion of relationship between KM opportunities organizational competitiveness and KM barriers organizational competitiveness.

4.2.2 Knowledge management opportunities

The discussion of the KM opportunities is based on the results statistical analysis, responses of interviewee and observation. Each of these opportunities and their contribution to KM practices, namely Knowledge acquisition, Knowledge creation, Knowledge documentation, Knowledge sharing, and Knowledge application is presented below.

The result of the present study revealed that JU has got various opportunities for KM practices, for knowledge acquisition, knowledge creation, and knowledge sharing and knowledge application and to collaborate and develop common understanding.

The first KM facilities (opportunities) in JU are ICT infrastructure and systems support KM practices (availability of office computer, internet connectivity and collaborative tools). According to Kidwell, Linde and Johnson (2000), using KM techniques and technologies in higher education is vital and if done effectively, it can lead to better decision making, reduced "product" development cycle time (for example curriculum development and research),improved academic and administrative services, and reduced costs. In general speaking colleges and universities have significant opportunities to apply KM practices to support every part of their mission from education to public service to research. As can be seen from table 4.4, JU has ICT facilities that enable organizational KM practices and help staff to share knowledge. ICT infrastructure are now recognized as core business considerations to promote intellectual asset and play vital roles in gaining competitive advantage (Rasli,Madjid and Asmi,2004). The result in respect of availability

of computer for staff (as 57.9% of respondents strongly agreed and 32.9% agreed) and internet connectivity (45.2% of strongly agreed and 41.4% agreed) according to respondents' responses. According to key respondents and observation result Video-conferencing, high bandwidth Internet which is the most obvious obstacle to use ICT in Africa (GeSCI, 2011), and email service are some of KM facilities available in JU.

But these high capacity ICT resources in JU are used only for simple tasks like email, video conferencing to transmit the graduation ceremony of the university to families of the graduates in the campus and some special meetings except College of Public and Medical Science take initiative in collaborating some students with students of universities oversee to share knowledge and culture this cross-cultural socialization is necessary to overcome the obstacles created by the considerable differences in (tacit) knowledge and values. This socialization can happen through experiencing foreign culture and socializing with foreign students using video conferencing facilities. Jimma University Institute of Technology is also delivering two engineering masters programs (Geotechnical and structure) to use external knowledge (expertise) using video conferencing. ICT Development Office (ICTDO) is the only office that using wiki for knowledge documentation and sharing. Most of the staffs working in this office adopted the culture people who attained any training should train other staff and write documentation put it on wiki system. In general KM technologies in JU are not one system, the effect of geographical distance is diminished by using these technologies and one can acquire and share knowledge.

JU Strategically invests in ICT to upgrade its teaching and support services (Library, classrooms and laboratories) and administrative processes to a competitive level that supports it aspiration for leadership (JU strategic plan, 2011). According to Mathew and Salalah, (2011) the knowledge environment is created by the significant support of technology to flow knowledge within the knowledge community and the major drawback of some organization is lack of technology availability supporting collaboration for capturing, transfer and storage of knowledge. JU in this regard has good opportunities to use these technologies in KM practices.

Library is organizational KM facility that enhances KM practices in JU. Libraries serve as the gateway to knowledge and this gateway is the digital means to access to information & knowledge (Rajurkar, 2011). The qualitative result of this study shows that JU library system is an opportunity that can be considered as storehouse of knowledge as knowledge in a library is recorded in books,

journals, newspapers, thesis, reports and other form of documents. Similarly the quantitative result shows that the respondents were in agreement (41.8%), neutral (32.5%) and disagreement (25.7%) on availability of Library that equipped with enough books, journals, lecture note. However, the staff use library rarely because of staff is not aware of on the resources available in the library as indicated above (see section 4.1.2). Exchange of knowledge has always been the most important objectives of libraries and libraries are fundamental to the goals of creating, disseminating, optimally utilizing and preserving knowledge of high quality and ICT facilities can enable library to provide access to all (Nazim, 2008). Therefore, JU library system has equipped with diversified resources and mechanism of KM practices.

External linkages and projects are also another organizational KM opportunity of JU. The main advantages of collaboration with external organizations are: capacity building, knowledge and experience sharing, developing programs (short term trainings, BSC,MSC PhD) , improving services, Developing and regular revision of curriculum, bringing international scholar evaluators from different universities of developed countries to teach in Jimma University, getting external examiners with appropriate educational background and work experiences to examine and Evaluation graduating class students, organizing International Workshops and financial support

As a result of this collaboration the workers (academic and administrative) work in different disciplines and offices trained and becoming the force of knowledge production, knowledge sharing, knowledge storage, knowledge application in JU.

Above all human capital is a good opportunity in JU. In addition to the technological and systems Variables involved in KM process, there is also the human aspect and each employee is responsible for his/her own knowledge related investments, renewal of knowledge, and sharing of knowledge assets within the employee's area of accountability (Bollinger, Smith, 2012). The result of this study revealed that people constitute the most important resource that JU has as a KM opportunity.
JU staff therefore are expected to use all KM opportunities in place, and so that they can achieve and inspire other employees with the ultimate aim of organizational competitiveness. However, the result of this study shows that Even though there are number of KM opportunities the overall usage of these KM opportunities is not to the desired level. This would ultimately leads to lose of individual and organizational competitiveness. This implies the need to aware of staff to efficiently use all KM opportunities in place and manage the knowledge resource.

Coming to the effectiveness of using the KM opportunities for organizational competitiveness, it is less according to interview and observation results. JU has facilities such as computers, good Internet connection (high bandwidth), high capacity video conferencing and Library database and e-resources that facilitate knowledge management practices namely knowledge acquisition, knowledge creation, knowledge documentation, knowledge sharing and apply knowledge. In addition to these, skilled human capital is the major KM opportunity in JU. Even if JU has various KM opportunities (technological and human aspects), these resources are not used as expected level to flourish the KM practices in the university. Organizational culture, competences and skills like communication and information literacy are very essential to use opportunities for individual organizational competitiveness.

External linkages and projects are organizational opportunity for KM practices in JU. The result of consulting documentations of this study revealed that external linkages and projects as KM opportunities change many aspects of JU. For example the program organized by the Flemish Inter University Council for University Development Cooperation (VLIR-UOS) is playing great role in sharing knowledge and experiences. This program has six projects namely, zoonotic and animal disease, child health and nutrition, environmental health and ecology, epidemiology and modeling, soil fertility and ICT and library projects. To see some advantages of ICT project of the program, in JU there was a working small World Wide Network (WAN) with very limited and unreliable services before the project launched. After started, the first action was training ICT staff on system configuration, development and administration and sharing the experiences of Belgium universities to some JU ICTDO staff. After training the staff assisting to implement the knowledge gained and provided ICT equipments for JU. As a result JU ICT infrastructure and services highly improved. After implementing the knowledge gained in JU, the staff of ICTDO of JU gained the capacity to organize an international training for other VLIR-UOS partners of six African countries and Ethiopian higher education institutions. This training built capacity at the other partners, but more importantly it built additional capacity in JU and other members were given the opportunity to learn and also help trainers to fully understand JU system. In general speaking the knowledge ICTDO of JU sharing for other universities of Ethiopia and other organization in different area of ICT was gained due to this project. Therefore JU in using External linkage and projects as KM opportunity seems effective.

4.2.3 Knowledge management barriers

As far as KM barriers are concerned, the finding of this study revealed that various barriers that might hamper KM practices in the university under consideration based on the results statistical analysis, responses of interviewee and observation. Major barriers are discussed here under. Most of the barriers to effective knowledge management involve people and humans are complex with diverse psychological needs (Bollinger and smith, 2001). The result of the present study revealed that KM barriers identified in this study were people related and organizational related barriers and these barriers hinder KM in JU.

One of the KM barriers in JU was found to be organizational culture. Organizational culture which related to individual behaviour and attitude towards KM practices. Some organizations are still struggling to find the right approach that will allow them to fully take advantage of their intellectual assets. Having the proper organizational culture remains an important barrier to knowledge management success (Ribiere and Tuggle, 2005).

According to Riege (2005), organizational culture, especially Knowledge sharing culture which is the cornerstone of organizations' KM strategy highly hinders the KM practices. Respondents indicated organizational culture is one of the biggest barriers to successfully implementing KM practices (see section 4.1.2). JU organizational culture is not conducive environment in which the employees share their knowledge from entire University structure to access different documents, experiences and other necessary information helpful to carry out their job. Personal relationships are more appreciated than impersonal relationships. The result of this study revealed online Knowledge sharing through email and others collaborative tools is not common in JU. This implies that, organization culture in JU is not as expected and should be improved.

Another barrier of KM practices in JU is the absence of KM office and staff in organizational structure that organize and manage organizational knowledge (see table 4.6). The majority of the respondents disagreed on the existence of KM office and responsible staff work on KM (55.50%). According to Abdullah, *et al* (2007) Knowledge won't be well managed until some group within a firm has clear responsibilities for the job (collecting, categorizing, knowledge, establishing a knowledge oriented technology infrastructure, and monitoring the use of knowledge). The majority of respondents strongly agreed on Knowledge hoarding among individuals is weakness and can hurt the organization; while sharing and collaboration is strength and can benefit the organization by allowing the knowledge to stay within the organization. Therefore JU needs to the responsible office and staff that capture

employees' tacit knowledge into organizational knowledge and mobilize the KM efforts in its structure even if knowledge is a social process (Allee, 2001).

Lack of collaboration is another big issue in JU. Meetings, forums, discussions, and the utilization of email and other collaborative tools at JU is very limited. Moving to a knowledge-based organization with improved horizontal and vertical knowledge sharing requires internal collaboration (UN-HABITAT, 2010). The result of this study revealed that many of the staffs in JU are unwilling to collaborate and share their limited expertise with colleagues and subordinates for many reasons. The Documenting culture of knowledge acquired from trainings workshops, conferences and others sources to sustain the service is limited. As a result the knowledge resides in individual s' heads (tacit knowledge) is lost when the person with expertise leave JU. The senior management support in this regard with the recognition that knowledge is an important organizational resource is not satisfactory.

Lack of time for KM practices (knowledge documentation, creation and sharing) seems another barrier that impacting KM practices in JU. According to Okyere-kwakye and MdNor (2010), as the behaviour people show in different situations depends on highly on their personal intentions as well as social forces, the degree of reluctance or willingness towards sharing their knowledge might also fit in the same case. The majority of respondents (52.80%) disagreed on JU staff do not have time to organize and share knowledge with each other (see table 4.4) and this implies that the employees have no habit to document their knowledge to contribute for organization wide use.

Trust is another KM barrier in the University under consideration. Interpersonal trust or trust between co-workers is an extremely essential attribute in organizational culture, which is believed to have a strong influence over knowledge sharing (Al-Alawi,Al-Marzooqi and Mohammed, 2007). According to trust among people (interpersonal trust) contributes to improvement in knowledge sharing behaviour among employees (Nonaka and Tekeuchi, 1995). The presence of trust can also be used as an indicator of KM initiative success (Ribière and Tuggle, 2005) and the result of this study revealed that interpersonal trust with information and knowledge is another barrier that hinders the knowledge sharing practices among JU workers (43% disagreed, 23.60% agreed and 33.2% neutral) on trust among staffs. From interview result some reasons of lack of trust among staff of JU are most of the people do not trust the capability of the staff willing to share their knowledge and lack of acknowledging the people who shared knowledge(their work).

Another KM factor in JU is job protection. Interviewees identified job protection as another factor impacting knowledge management practices. This barrier may have interdependency with trust barrier

discussed above. Humans are complex with diverse psychological needs (Bollinger and Smith, 2001). Due to this and other reasons the job protection in JU is accepted as the argument that people who shared knowledge may be replaced by someone else suspect their colleagues and prefer hoarding their knowledge. As indicated above (see section 4.1.5), KM is working with people and people are hard to work with because introducing KM practice is a change process and require change in attitude, change in thinking among staff in the organization and moving these people to the attitude knowledge is a common property and shared throughout in the organization.

Language barrier is another factor that impedes the KM practices. According to Allee (2001), knowledge travels via language; without a language to describe our experiences, we can't communicate what we know. JU is using English language for teaching and learning process .English is the second language of most staffs in JU and the majority of the respondents (47.3% agreed and that language is one of the barriers that impacts KM practices in JU where as 26.7% were neutral on the issue. Similarly the majority of the respondents 55.1% agreed and 16.2% strongly agreed that employees' ICT skill is one of the factors impacting knowledge management practices in JU (see table 4.11). The implication of this idea is thus, training staff to build the ICT skill of staff should be considered.

Lack of reward system was also found to be another factor that impacting knowledge management practices in JU as 39.7%, 22.6%,19.2% of the respondents strongly agreed, neutral and disagreed respectively on the availability of reward system. To achieve effective Knowledge sharing it is important to encourage workers to share their knowledge for the best interest of the firm (Lee and Ahn, 2007). In addition to this, a clear and viable system is not established to create a motivating working environment whereby team spirit is well developed and efficiency is rewarded, whereby the staff at large anticipate change in a proactive manner (JU, 2011).

Individual motivation is another barrier that hinders Knowledge management practices. The result of study revealed that there are many reasons for lack of individual motivation for KM practices: some employees deliberately abuse the knowledge they gained through trainings, workshops and conferences, because they see this as an advantage over their co-workers. Another reason is to protect their job to be replaced by somebody else as discussed above. Many employees accepted the argument that the person with specific knowledge should remain important to JU.

Lack of sufficient trainings is another KM barrier in JU. The result of this study revealed that the trainings offered for staff especially for the administrative staffs were not sufficient in order to play the

role expected of them to achieve the goal of the University. Training opportunities for further studies for Academic staff have been improved (local or abroad). However, inequitable distribution of scholarship opportunities to colleges, and overlooking departments need when planning human resource development have been cited as the main factors to the prevalence of high staff turnover and the dominance of inexperienced academic staff in the total academic staff profile/mix (JU,2011). The training opportunities for Administrative staff (further study and short term trainings) is very low as 26.00%, 54.10%, 19.9% of the respondent were in agreement, disagreement and neutral respectively if this (see table 4.4). Similarly the interview result revealed that Lack of sufficient trainings and conferences that enhance the knowledge acquisition of individuals which increases the competitiveness of staff is another critical issue in JU (see section 4.1.2). The university has rules and regulation for long term trainings (BA/BSC, MSC and PhD). In this regard most of the respondents said there is a chance to get long term education (Masters and PhD programs) for academic staff but short term trainings, workshops and conferences that enhance the acquisition of the staff are rare. For administrative workers there are little chance to update their knowledge. On the other hand very few offices have planned to provide trainings for their staff using local experts and by cooperating with external organizations and professional networks.

Lack of regular meetings on professional matters is another KM factor in JU. Respondents feel that many offices and departments in JU have no regular meetings on professional matters. Many department heads and office managers are unwilling to organize meetings on professional matters. This implies that there is no way staff learn from each other, apply knowledge together to foster knowledge in the university, avoid reinventing , improve productivity and finally improve the individuals competitiveness and organizational competitiveness at large.

Absence of alignment of KM strategy with business strategy is also one of the KM barriers in JU. An institution's strategy for KM must be firmly rooted in its core competencies, embedded in its work processes (Hampate, 2007). The result obtained through interview indicated disagreement on the alignment of KM strategy with business strategy. In addition to this efforts made to consult the five year strategic plan of JU and the KM strategy was not well addressed. This ultimately would leads to failure of individual and organizational competitiveness.

Limited research output dissemination also seems to be one barrier impacting KM practices of JU. Storing knowledge is not new in Universities but sharing knowledge and using it among academics and students is new (Khosravi and Ahmad, 2012). Research is one of the core missions of universities. According to the Ethiopian Higher education proclamation, one of the major objectives of HEIs is to

promote and enhance research focusing on knowledge and technology transfer consistent with the country's priority needs (FDRE, 2009). The result from consulting of documents revealed that, though a number of researches have been undertaken in JU over the past years only very few of them have been disseminated through publication by JU. Collaborative and multidisciplinary researches are very limited. Furthermore, there are no adequate journals subscribed to advance research. The research policy and strategy, and the forums for effective dissemination of research results to the beneficiaries have been created and implementation of the policy and ensuring the sustainability of the dissemination forum is a challenge ahead of JU. The university did not have collected and indexed the research outputs published in international and national journals, indicating the need for institutionalization of research outputs. The culture of publication and dissemination of research outputs in JU remain poor (JU, 2011). This implies that JU needs to work on disseminating newly created knowledge timely.

CHAPTER FIVE

5.0   CONCLUSION AND RECOMMENDATIONS

5.1 CONCLUSIONS

Knowledge is the key tool for individual and organizational success and sustainability and needs to be managed. Knowledge management is a set of tools and techniques used to capture, share, and apply knowledge assets. Knowledge management is to guarantee organizational successes; unfortunately Jimma University has not grown much in managing knowledge assets. In the process of managing knowledge assets there are opportunities that enable or barriers that impede the knowledge management practice of the organizations.

The research method for this study was survey research method and simple random sampling technique was used for this study to have the representative sample. Both qualitative and quantitative approaches were used. Qualitative dimension refers to data that was collected from some office holders through interview and observation whereas, quantitative data reefers to the data collected from academic and administrative staff using questionnaire.

The major KM opportunities in JU were identified. These are office computers, high bandwidth internet connectivity, video conferencing, knowledge networks such as e-mail and wiki, that facilitate the knowledge acquisition, creation, documentation, sharing and application of knowledge resources from anywhere any time. Another opportunity of KM practices is external linkages and projects with different external universities and others organizations. These external linkages and projects are sources of knowledge and experiences that enhance the individual and organizational competitiveness. Library resources (both hardcopy and e-resources) are another opportunity of Knowledge acquisition and storehouse of knowledge in JU. Skilled human resources in the university in different disciplines are the major KM opportunity in JU and using these facilities for knowledge management practices was not effective except the external linkage projects that improve KM practices for individual and organizational competitiveness in JU..

In addition to KM facilities, KM barriers in JU were also identified and these barriers separated in to people related and organizational related barriers. The identified organizational related barriers are: Organization culture, absence of KM strategy aligned with business strategy of the University, lack of sufficient trainings and conferences for staff especially for the administrative staff, lack of KM reward system, lack of regular meetings on professional matters, and absence of KM office in university structure, are the major organizational related barriers. According to Bollinger and smith

(2001) "most of the barriers to effective KM involve people" and the major people related barriers were found to be individual motivation, trust ,and absence of Collaboration.

5.2 RECOMMENDATION

As shown in the result and discussion part, JU has KM opportunities that enable the KM practices of the university. But using all these opportunities for individual and organizational competitiveness is not as expected level. Identifying KM barriers in JU was another focus of these study and major KM barriers were identified. These barriers categorized in to people related and organization related factors. The researcher has a strong belief that be addressing the identified KM practices problems, it would be possible to improve KM practices in JU However, the researcher is not doubtful from the fact that addressing these challenges are not an easy tasks and requires the commitment of all JU staff and manager at all levels. However, he believes that the following recommendations can be taken as a initial point to improve the KM practices in the university.

5.3.1 The University library should create the awareness university communities on the available resources and how to use the tools and technologies to create good learner, sharer and resource re-users.

5.3.2 In the reform programs and strategies of JU, KM should be one of the components of management initiatives and due attention needs to be given to include reward systems for the staff who contribute to KM practices.

5.3.5 Enough budgets should be allocated for staff trainings, international workshops and conferences as a part of KM initiative. Awareness creation programs on KM practices is another issue which needs to be planned to change organizational values and culture, changing people's behaviors and work patterns, and providing people with ease of access to knowledge and information resources.

5.3.6 JU as higher educational institution has significant KM activities and it is important to recognize these activities and use them as a foundations for further KM practices , rather than to invent a whole new paradigm or from scratch .

5.3.7 5.3.6 Advanced KM repositories and tools such as Document Management Systems, knowledge base, collaboration platforms (wiki, blogs, intranet portal, E-learning), web conferencing, IP telephony, data warehouse that integrate collection of knowledge in series

of linked repositories to encompass internal and external knowledge to support the vision of the University in all direction. In addition ICT infrastructure and systems that are available should be used effectively and efficiently for KM practices.

5.3.8 Regarding external linkages and projects, JU needs to expand and collaborative partnerships and linkages and manage knowledge assets gained from these external linkages to enhance service provision, creation, sharing, preservation and dissemination of knowledge and experiences

5.3.9 All managers at all level in JU should play their role to support and motivate their staff towards KM practices(Knowledge creation, documentation ,sharing and application.) and establish an environment in which people are encouraged to create, learn, share, and use knowledge for the benefit of the JU and themselves. Valuing Knowledge asset in JU is another issue needs to be improved. The KM initiatives in JU should start from the people where the knowledge of the employees are created, captured, shared and used for the University's efficiency, effectiveness and improvement.

5.3.10 KM office and staff that responsible to facilitate the KM practices and manage knowledge asset should be established in JU. When the KM office or persons responsible for KM are located within the JU, the advancing technology activities tend to be the focus of KM activities and prevent losing of knowledge among employees. The office to be established should strategically identify the important organizational knowledge (both tacit and explicit) and manage it to minimize lose of knowledge when a staff leave the university and avoid unnecessary reinvention. As a change management program the office should do good pilot, deliver success and publicize and others learn and use knowledge and experience management from the success story.

5.3.11 In order to improve the benefits gained from KM initiatives JU should develop KM strategies that aligned with JU's business strategy and serve to integrate people, technology and processes management principle into over all KM systems. The success of KM lies in the willingness of the staff. Therefore, human resource policies and plan should motivate and encourage at team level and organization level the KM practices of JU . In addition JU should strive to improve employee retention rate, so that more knowledge is retained in the university. The strategy should enhance people to people knowledge transfer, foster knowledge sharing culture and support collaboration in the University. The proposed framework for JU KM office should be established as presented in figure 5.1 and table 5.1

Recommendation for future research

This study is limited to Jimma University. In the future, such a study should be escalated to other higher institutions and non academic institutions to assess their opportunities and barriers of KM to attain competitive advantage.

Figure 5.1: Organizational structure of KM office in the university structure

```
┌──────────────────────────────────────┐
│         Higher education council       │
└──────────────────────────────────────┘
                    │
┌──────────────────────────────────────┐
│            University board            │
└──────────────────────────────────────┘
                    │
┌──────────────────────────────────────┐
│   Business Leader (President Office)    │
└──────────────────────────────────────┘
                    │
┌──────────────────────────────────────┐
│   Director for Knowledge Management     │
│   (Chief knowledge officer)             │
└──────────────────────────────────────┘
```
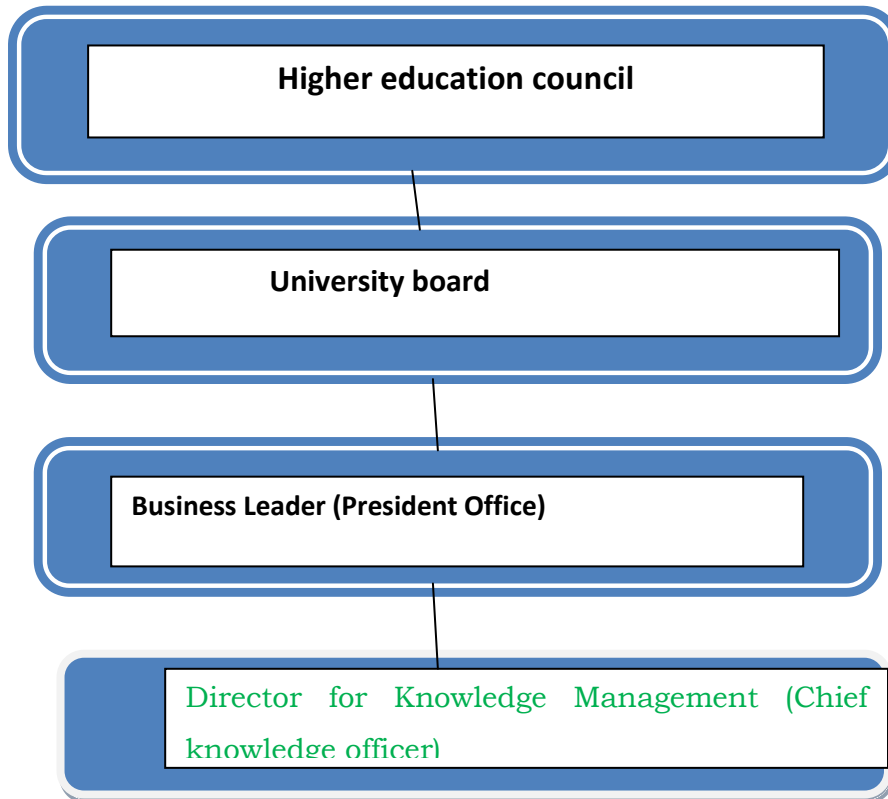
Table 5.1: framework of KM officers in JU

Position	Responsibility of the officers
Chief knowledge officer (Director)	A strategic, senior management position focused on promoting, communicating, and facilitating KM practices in the corporation.
Knowledge analyst	A tactical, lower- to midlevel position that involves learning and personally disseminating the best practices of the organization.
Knowledge engineer.	A tactical, lower-level position that is focused on collecting information from experts and representing it in an organized form, typically in computer-based systems, that can be shared and stored in the corporation. Knowledge engineers frequently form the interface between employees and computer technologies, such as expert systems—programs that imitate the decision-making abilities of experts.
Knowledge manager.	A tactical, midlevel position that involves coordinating the work of knowledge engineers and analysts, especially in larger corporations.

REFERENCES

Abdolshah,M.& Abdolshah,S.(2011).*barriers to the implementation of knowledge management in Iranian institutions*

Abdullah,R., Shahabudin,S.,Alias, R.,Mohd,S.(2007) .Developing knowledge management system for publ6ic higher education learning in collaborative environment

Allee,V.(2001).*12 principles of knowledge management: American society for Training and Development*

Alwis,R.& Hartmann,E.(2008).*the use of tacit knowledge within innovative companies*

Anantatmula,V.(2005).*outcomes of knowledge management initiatives*

Bartholomew,D.(2005).*sharing knowledge*

Bergeron,B.(2003).*Essentials of knowledge management: John Wiley & sons, Inc.*

Bollinger, A., &Smith ,R.(2001).*managing organizational knowledge as a strategic asset*

Brikley,L.(2006).*Retrieved January 5,2013 from www.theworkfoundation.com Defining the knowledge economy*

Butcher,N. (2007).*Knowledge management strategies for distance education:*

Butcher,N. (2011).*ICT, education, development ,and the knowledge society*

Dahlman ,C.&Utz,Anuja.(2005*).India and the knowledge economy*

Denford,J.& Chan,Y.(2011).*knowledge strategy typologies: defining dimension and relationships*

Evans,H.& Clegg,H.(2011*).building an effective knowledge management programme*

Hampate,A.(2007).*Knowledge Management strategy*

Hlupic,V.,pouloudi,A.&Rzevski,G.(2002).*Towards an integrated approach to knowledge management*

Jarrar ,Y.& Zairi ,M.(2010*).knowledge management learning for organizational experience.*

Jones,K.,& Leonard, L.(2009).*From Tacit knowledge to organizational knowledge for success KM*

Kaplan,R.,P.Norton,D.(1992).*The balanced scorecard measures that d drives performance :Harvard business review*

Karl-Erik, S.(1999). *Welcome to the Knowledge Organization*

Keyes,J.(2008).*Identifying the barriers to knowledge sharing in knowledge intensive organizations*

Khalil,O.& Shea,T.(2012).*knowledge sharing barriers and effectiveness at higher education institution*

Kidwell,J., Linde,K. and Johnson,S.(2000).*Applying Corporate in Higher Education*

King, W. (2009). *Knowledge management and organizational learning*

Laoufi,A .*et al*(2011). *using knowledge management in higher education: research challenges and opportunities*

Lee,D. and Ahn,J.(2006).*Reward systems for intra-organizational knowledge sharing*

Martensson,M.(2000*).A critical review of knowledge management as a management tool*

Materska,K.(2004).*Librarian in the knowledge age*

Nazim,M.(2008).*Impact of Information Technology and Role of Libraries in the Age of Information and Knowledge Societies*

Niven,P.(2006*).Balanced scorecard step-by-step*

Okyere-kwakye,E.& MdNor, K.*(2010).Individual factors and knowledge sharing:American journal of economics and Business Administration*

Omona,W.,Weide,T.&Lubega,J.(2010*).using ICT to enhance knowledge management in higher education.vol 6,pp83-101*

Pillania,R.(2008*).Information technology strategy for knowledge management in Indian Automotive components*

Pircher,R.& Pausits, A.(2011).*information and knowledge management at higher education institution*

Rahel,B.&Ermias,A.(2011).*prospects of knowledge sharing Among Ethiopian Institutions of higher learning*

Rajurkar,M.(2011).*Knowledge Management in Academic Libraries Volume1,Issue1,2011, pp-05-08*

Rasli,A.,Madjid,M.,and Asmi,A.(2004).factors that influencing implementation of knowledge management and information technology infrastructure to support project performance in the construction industry

Ribiere,V.&Tuggle,F.(2005).*The role of organizational trust in knowledge management*

Rowley, J.(2000) .*Is higher education ready for knowledge management?*

Seifu, Y. (2002). A Historical Survey of Jimma Town. Published by Addis Abeba University. Addis Abeba, Ethiopia. Pp. 1-5

Sharratt,M. &Usoro,A.(2003*).understanding knowledge sharing in online communities of practices*

Smith, T.,M. Mills, A., and Dion, P.(2010). *linking business strategy and Knowledge Management Capabilities for organizational Effectiveness*

Smith,T.,Mills,A.&Dion,P.(2010*). Linking Business strategy and knowledge management capabilities for organizational effectiveness*

Turner,G.&Minonne,C.(*2010).measuring the effects of knowledge management practices Electronic journal of knowledge management vol issue 1 pp 161-170*

Turyasingura,W.(2011).*Interdependency of knowledge management organizational learning*

UN-HABITAT. (2010).*UN-HABITAT Knowledge Strategy: Building knowledge based organization*

Wilde, S.(2011) .*customer knowledge management*

Yogesh,S. (2006) .*fundamental of research methodology and statics :new age international limited publishers pp 99*

A practical approach to information management.(n.d).Retrieved Sunday, March 6, 2013 from

www.symantec.com

APPENDICES

Appendix A:

QUESTIONNARE FOR EMPLOYEES OF JIMMA UNIVERSITY

1. Introduction

Dear respondent,

First of all thank you for decision to take part in a research survey and this questionnaire is designed by a researcher to undertake a research entitled "Assessment of Knowledge Management opportunities and barriers for individual and organizational competitiveness in Jimma University"

The general objective of the study is to assess knowledge management opportunities for individual and organizational competitiveness and barriers in Jimma University.

This questionnaire contains two parts: The first part is about Demographic questions the second part contains 51 statements designed to identify knowledge management opportunities and barriers on 5- points' scale. Detailed instructions are given for each part in the questionnaire for your guidance. Kindly give your assessment by **ticking** the appropriate box. It will take you about 30 minutes to complete the questionnaire. Therefore, please complete each parts of the questionnaire with at most commitment and integrity. Your answers will be kept anonymous and confidential no names, positions and employee ID number requested at any stage. I am looking forward to reply. Thanking you for your cooperation!

2. Demographic questions(part I)

The following questions are for classification purpose only. They will not be used to identify any individual. Please fill in only one response per question.

2.1 What is your gender?　☐ Male　　　☐ Female

2.2 Please select your age group, from the following options.

　☐ <25 years　　☐ 26-35 years　☐ 36-45 years　☐ 46-55 years　☐ >56 years

2.3 Please select your academic status

　☐BA/BSc degree　☐ Master's Degree　☐ Doctorate degree (PHD)　☐ MD　☐ DVM

　☐ Other (please specify)………………

2.4 Which category are you attached to?

　☐ Academic staff　　　　☐ Administration staff

2.5 What is your academic rank?

　☐ Assistant lecturer　☐ lecturer　　　☐ Assistant professor

　☐ Graduate assistant　☐ Associate professor　☐ Professor

1. If you are an administration staff where you are working in?

　☐ Finance　☐ Purchasing　☐ Library　☐ICT ☐ Human resource management ……

　☐ Registrar　☐ Audit ☐ planning　☐ Public Relation ☐ others (specify) ------

2.6 If you are an academic staff which is your college/Institute?

　☐ College of Natural Sciences　　　　☐ College of Social Sciences and Law

　☐ Institute of Technology　　　　　　☐ College of Business and Economics

　☐ College of Public Health and Medical Sciences　☐ Research Institute

　☐ Institute of Education and Professional Development

　☐ College of Agriculture and Veterinary Medicine

3. **Part II Knowledge management facilities, Organizational related Factors and People related factors**

For questions in part **two II   please** indicate the extent of your agreement with the statements given by ticking the appropriate point under the provided scale.

5 = strongly agree

4 = agree

3 = neutral

2 = disagree

1 = strongly disagree

Note: Knowledge management is strategies and practices used in an organization to identify, create, organize, disseminate and sharing knowledge

The questions below are on **Knowledge management Factors (opportunities and barriers**) in Jimma University**. Knowledge management** includes knowledge creation, knowledge dissemination, knowledge sharing, knowledge documentation, knowledge application

A	Knowledge management facilities	1	2	3	4	5
1	Staff do have office computer					
2	Staff do have internet connectivity helps to broaden individual knowledge					
3	Jimma University(JU) has Video conferencing system helps for knowledge sharing					
4	The university do have collaborative tools that allows communication with groups					
5	There are enough halls where staff can meet and exchange knowledge/experience					
6	There is an Intranet(local network) that helps to share staff experience of knowing where to find information with other members in JU					
7	JU has Library that equipped with enough books ,journals, lecture note					

8	JU Library has databases and internet connectivity to download materials					
9	There are knowledge documentation such as report and databases that can be accessed by the staff in JU					
B	**Organizational related Factors**	1	2	3	4	5
10	JU is good at using knowledge networks such as (e-mail, wiki, forum) for knowledge management					
11	JU knowledge management is aligned with organizational goals and strategy of university					
12	Jimma University allocates adequate resources to support knowledge management with the latest technologies					
13	There are regular Trainings and conferences that enhance the knowledge acquisition of individuals in JU					
14	There are structured platform of knowledge transfer such as forum, workshop, conferences, team teaching/working and joint projects in JU					
15	Jimma University makes effort to collaborate staff with external professional networks					
16	Jimma University makes effort to collaborate staff with external professional associations					
17	There are motivation and reward system for knowledge management in JU					
18	Jimma university value knowledge shared by staff					
19	The organizational structure of Jimma University is conducive for dedicated knowledge management					
20	There are informally built professional relationships (external or internal) to open knowledge channel in Jimma University					
21	There is knowledge management office and staff in Jimma University					
22	ICT trainings are provided for staff in JU					
C	**People related factors**	1	2	3	4	5
23	I believe in Knowledge sharing is strength and knowledge hoarding(not sharing) is a weakness					

24	Jimma university staff are good in sharing knowledge after obtained trainings					
25	Jimma university staff are good in disseminating research findings to the university staff and community surrounding					
26	Staff use intranet and internet for work related tasks to increase their productivity					
27	Jimma University staff trust each other to share knowledge					
28	There is sufficient individual motivation to share knowledge in JU					
29	Jimma University staff do not have time to organize and share knowledge with others					
30	Language skill hampers Knowledge sharing and creation of staff					
31	ICT skill hampers the knowledge creation and sharing of staff					
32	Exposure to technologies impacts the knowledge creation and sharing of staff					
33	Incentive increases the contribution of staff in sharing obtained knowledge and creating new knowledge					
34	New employees attend induction training in Jimma University					
35	New members of staff are assigned to mentors who help them to find their way in the organization					
36	Much knowledge sharing is done in the tea rooms					
37	Regular meetings are organized for professional matters in offices					
38	Job rotation allows knowledge sharing					
39	Jimma University has up-to-date hand books which are frequently used					
40	Jimma University has up-to-date teaching materials which are frequently used					
41	Jimma University has up-to-date work guide lines which are frequently used					
42	Staff are supported for make explicit(write down) the methods they use in step-by-step description					

43	Specific knowledge and skills of individuals have been documented in JU					
44	ICT technologies foster JU competitiveness in knowledge sharing					
45	ICT make contribution to acquire knowledge					
46	ICT services in Jimma University is satisfactory					
47	New ideas for knowledge management come from individuals in JU					
48	There is clear university wide guide line as what/when/how/how much knowledge to share					
49	Others (specify…………………………………………………………………... …………………………………………………………………………)					

Interview schedule for assessing knowledge management opportunities and barriers
Section A: General Information

1. College/Office_____
2. Date_____
3. Time Interview started _____Time Interview end_____
4. Sex of the respondent_____
5. Year spent at Jimma University
6. Educational Status _____

Section B:

1. **Knowledge management in Jimma University**

7.1 please indicate which of the following knowledge management practices are common at your college/Office

Knowledge sharing	
Knowledge acquisition	
Knowledge documentation	
Knowledge creation	
Knowledge dissemination	
Knowledge application	
Any other specify	

7.2 Are there any recognizable knowledge management strategies being implemented by your college/Office?
If so please name them .---

7.3 In your view what opportunities are available to facilitate the knowledge management practices indicated above at your college/Office? --
----

7.4 In your view what barriers are affecting   the knowledge management practices indicated above at your college/Office? --
----

7.4 How do you judge your college/Office knowledge sharing practice among staffs)? Can you support your response with practical examples?---
----

7.5 How do you judge your effort in strengthening staff knowledge sharing culture and allocating necessary resources?--

----

7.6 In your opinion what should the Jimma university do to improve knowledge management practices? ---

----

Appendix C
Observation check list

	Yes	No	Remark
2. Incentive mechanism for knowledge sharing			
3. Availability and alignment of knowledge management strategy with organizational strategies			
4. Availability of knowledge management team in Jimma University			
5. High Staff turn over rate			
6. Availability of documented staff work			
7. Availability of enough hall(place) where staff socialize knowledge			
8. Availability of ICT Tools for knowledge management practices(web conferencing , IP telephony)			
9. Group decision support system			
10. video conferencing system			
11. document management system			
12. knowledge portal			
13. E-document management system(E-library)			
14. Groupware(wiki, knowledge forum)			
15. availability personal computer and internet connectivity for staff			
16. Availability knowledge networks such as of e-mail, web social media			