

Systemizing Knowledge Sharing: A Case Study of the Kingdom of Bahrain

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ABSTRACT

This research paper reviews the current issues of the knowledge management system (KMS) in the Kingdom of Bahrain (KoB) and its aim is to provide solutions to review, improve and identify gaps and objectives of KMSs in KoB, rather than just presenting guidelines of such a system which will deem special interest to businesses in the KoB. The intellectual contribution is based initially on a literature review followed by questionnaire-based in addition to face-to-face interviews of employees of an audit firm in KoB. The paper assesses the results of the quantities research and concludes the opinions and demands.

Keywords: Knowledge Management, Knowledge Management System, Knowledge Sharing.

INTRODUCTOIN

KM is a term that refers to a system that a company adopts in order to manage knowledge that supports creation, storage, capturing, controlling and dissemination of information. The main idea is to enable employees to have easy and direct access to best practices, facts, rules, procedures and many other source of information that are documented by an organization. Knowledge management (KM) involves many activities i.e.: (1) building databases, measuring (2) intellectual assets, (3) establishing company libraries, (4) building Intranets, (5) sharing best practices, (6) installing groupware, (7) managing cultural changes, (8) fostering teamwork and (9) creating virtual organizations.

In an era where knowledge is increasingly viewed as the most valuable asset in an organization, many firms have implemented a KMS. However, one of the biggest challenges organizations faces today is their inability to capture knowledge possessed by their employees. In the future, some organizations will not survive if they are unable to assume an effective strategy for managing and capturing their intellectual capital. However, it became apparent that the term KMS has been applied on such activities that manage exchange and create intellectual assets within an organization. Applications used in the discipline of KM range from the development of highly sophisticated help desk systems to a simple system such as video conferencing or people exchanging ideas by themselves or through mediums like email or groupware. KMS has been widely known as one of the tools that support: (1) an organizational competitiveness and (2) strategies to maintain their position in this rapidly changing market-based environment.

It is also important to note that employees leave their positions for better opportunities and once they leave an organization their knowledge walks away with them. Another issue is that things

change fast on a daily bases. The same goes with our knowledge that matures from what we knew three years before making the old knowledge now obsolete. This point strengths the importance for the role of a KMS that organizes, logs and stores information for ages to come. Despite the advances in the Information System (IS), KM is much more than information typed into the system database. It is an attitude that a system will promote to shape the future of how information is communicated in businesses and will foster the training process for new employees who will hence use what already exist. Therefore, by utilizing the KMS, an organization can meet their customers, suppliers, partners, and employees' standards. Hence provide a higher quality performing products and services anytime and anywhere.

LITERATUE REVIEW

Knowledge is something that is processed from information. Information includes experiences, and values that are processed from data. Many organizations have come to realize they own massive amounts of knowledge. This knowledge needs to be managed in order to be applicably useful. Knowledge is defined as a "*fluid mixture of experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information*" Davenport and Prusak (1998). However, Alavi and Leidner (2001) present another definition of KM stating it as "*justified personal belief that increases an individual's capacity to take action.*" There are two type of knowledge, namely explicit and tacit knowledge (Nonaka and Takeuchi, 1996). Tacit knowledge is stored in human mind. It is the knowledge of "How-to". On the other hand explicit knowledge is stored within a system e.g.: documents, reports, files....etc.

Many different definitions of KMS have been published, but most of them support the idea that KMS is primarily a management science and relative to a computing science. Defining KMS

varies from person to person, based on the context and use (Neef, 1999, Bhatt; 2004, Raub & Rulling 2001). Thomas H. Davenport and Brooks (2004) describe KM as: "*what happens at the moment in time when information becomes valuable to the individual seeking it. In call centers, help desks, and other support environments, that individual is either the support agent seeking information to help a customer, or a customer (product user, employee, partner, or vendor) seeking answers in a web-based self-help environment.*" KM has also been described by Turban & Aronson (2002) as '*a process that helps organisations identifies, select, organize, disseminate, and transfer important information and expertise that are part of the organisational memory that typically resides within the organisation in an unstructured manner.*'

According to Primus knowledge solutions (2002), ContactCenterWorld.Com (nd) and Talisma Corporation (2006), in order to have a successfully implemented KMS in any organization it is essential to consider the following points being:

1. Make KMS an integral part of the work flow - A KMS is not just an "official" work-flow process that has to be literally followed, but it is a system that links real –world practices of the people to their needs and goals, as well as, facilitates their learning process,
2. Provide an easy access for valuable information across the departments by using a KMS,
3. Attain full support of top-level management towards lower-level employees,
4. Assure that the KMs is not complicated and is clearly understood by the workers- A recent study indicated that in KMS 80% are Organizational processes and human factors while only 20% is Technology,
5. Reward and recognize the efforts of knowledge sharing participants,
6. Affirm to analyze the results and monitor performance for continuous improvement and
7. Create a knowledge sharing culture before creating a KMS.

CHALLENGES IN A KMS

As Booth (2007) states that explicit knowledge is evidence-based research that has introduced centers like evidence-based education and evidence-based social services is knowledge generated in documents (old way) and documents published on the Internet or journals (new way). 3 if 8 sites in NHS facilities have hired librarians to manage knowledge and have been trained to query, and attained the ability to research and filter and summarize through journals for the needful. This shows that one of the intense challenges for a KMS is to make information meaningful by filtering unwanted content. Users complain that they find themselves overloaded with information. As Nonaka, Toyama and Konno (2000) mentions that redundant is information overlapping however redundant information promotes creation of tacit knowledge even though it load to information over load that hence making knowledge creation more of an expensive process. Too much information may obscure the knowledge that could be applied if it were put into a context that made it easy to assimilate and use. This creates an environment rich for organizational learning; innovation and creativity but have to make it clear as to where knowledge needs to be shared within an organization.

The information management challenge of many organizations centers on enabling users to access huge volumes of technical reports, documents, project studies and other kinds of information formats. The knowledge assets are inside the minds of employees. Knowledge needs to be managed in order to convert this tacit knowledge to explicit knowledge. As Nonaka, Toyama and Konno (2000) mentions that such interactions are possible by shifting created knowledge from one mode to another as per the SECI model illustrated below in figure 1.

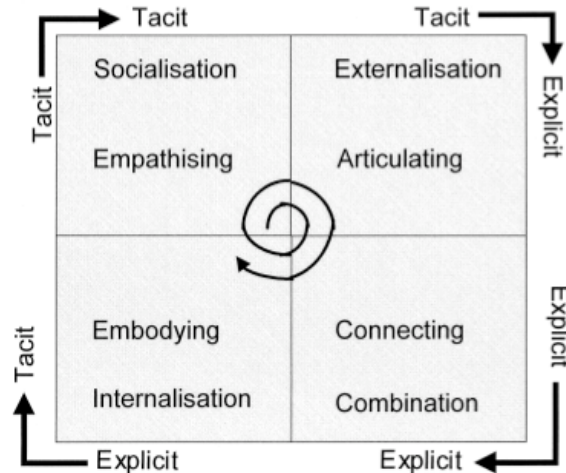


Figure 1. SECI process model

Adapted from: Nonaka, Toyama and Konno (2000)

This process is simple when it begins dynamically from at an individual level but as it moves in the people of interactions it expands dramatically taking place inside and outside of an organization.

Establishing effective information and records management practices are a major challenge within corporations addressable with an appropriate KMS tools and its accompanying techniques. This hence is beneficial when an organization's performance, gets improved through increased effectiveness, productivity, risk management, decision-making, innovation and most important quality.

As Bures(2003) dictates that there are individual and social barriers in knowledge sharing and there are conflicts in the motives that slow down the insensitive system. It seems quite easy to say that a corporate culture is a pre-requisite for knowledge sharing. However it is not feasible at a quick rate and neither is simple to begin with. A solution is the incorporation of a KMS to

facilitate the existence of a corporate culture. Here social groups that share knowledge are: (1) sharing of best practices from knowledge repositories, (2) learning, discussing and speaking with co-workers, (3) producing written reports and analyses, (4) responding and proposing comments openly, (5) documenting insights to problems and (6) utilizing existing repositories to apply knowledge. Social barriers are: (1) fear to loose of power for knowledge is power, (2) fear for an embarrassing situation to occur once knowledge is shared hence criticized, (3) juniors are not certain if their potentially contributed knowledge is of value, (4) fear to loose the work rewards with secret knowledge is dissipated, (5) language and (6) conflict of motives when people want to share knowledge but cannot for social barriers mentioned above or are forced to share knowledge but do not want to for also social reasons mentioned above. An organization will always be challenged to find ways to stimulate and maintain a culture where collaboration is continually rewarded and emphasized by people who create knowledge and their interactions with others that allow them to benefit from that knowledge in terms of learning, innovation and increased productivity.

The challenge in today's business environment is to make decisions that will put the company first and take advantage of new opportunities, or will enable the company to use innovation to remain at the forefront of their market sector. To do so, it needs rapid access to reliable information. As Nemati, Steiger, Iyer and Herschel (2002) sheds light to propose a DSS – decision support system contributing for knowledge extraction or acquainting in the area of KM to enhance, promote and facilitate the tacit to explicit knowledge also made possible by the expert systems part of the SECI model illustrated in figure 1 above. This is possible provided the organization as a knowledge warehouse with the right information getting filtered (using filtering criteria) by an appointed CKO – chief knowledge officer who understands the difference

between what is artificial intelligence (applied when converting tacit to tacit knowledge in the SECI model) versus human intelligence. KMS's DSS agent as a solution can assist organizations to become more successful and profitable by reducing cycle times associated with research, problem solving, and decision-making. The appropriate capture, documentation, storage, retrieval and reuse of information can improve business decisions, significantly minimizing business disruption, and accelerate competency development of new employees.

As Hew and Hara (2006) states that knowledge sharing within a community of practice (most common method to share knowledge those posting message) is conversations amongst people. The most kind of sharing are personal opinions and institutional practice-based knowledge. When the company attempts to build knowledge sharing culture it faces a number of unhelpful attitudes within the workforce such as lack of organizational flexibility and insufficient openness to change, some people will simply lack the individual desire and motivation to alter established habits and behaviors. Five types of motive are possible for sharing knowledge are "(a) self-selection type of membership, (b) desire to improve the nursing profession, (c) reciprocity, (d) a non-competitive environment, and (e) the role of the listserv moderator." Hence, organizations acknowledge active participants, other incentive programs that might offer opportunities for peer recognition and possibly even promotion and including participation in KMS in the employee performance metrics that an organization sets for its workforce.

METHODOLOGY

The first type methodology conducted for this study was a theoretical literature review that was carried out by researching knowledge, KM and KMS followed by documenting and analyzing barriers that organizations face as challenges when developing and installing KMS. Next, a

quantities research methodology was adapted through simple random samples of 50 employees from x-organization. These employees were asked to fill out questionnaires with fifteen-minutes face-to-face interviews conducted by the researchers of this intellectual contribution. This questionnaire assessed KM practice developed by the Organization for Economic Cooperation and Development (OECD). The similar questionnaire was utilized for testing in Denmark in 2001.

The questionnaire is made up of *two sections* being: (1) 5 questions - measure KM practice within an organization and (2) describing employee personal information - gender, years of experience, working department. With regards to the first section; the first question describes KM practice from 4 main aspects: a. communications, b. training and mentoring, c. policies and strategies, and d. knowledge capture and acquisition. The second question evaluates the importance of the level of KM practices through four main aspects in a. knowledge integration/sharing, b. knowledge captures and control, c. information management, and d. human resource management. The third question measures the effectiveness of using KM practice. The fourth question asks whether the organization is specifying an explicit KM section. The fifth question asks whether there is an assigned budget for the KM practices.

The first section's first question used five alternative responses being: (1) In Use before 2 years, (2) Used this year, (3) Plan to Use in the Next 2 years, (4) not in use / Not Applicable and (5) Don't know. All these responses were scored on a scale of 1 to 5, respectively. The second question of the first section used a scale that represented: (1) very important, (2) important, (3) moderately important, (4) of little important and (5) unimportant. All these responses were scored on a scale of 1 to 5, respectively. The third question of the same section used also a scale

that represented: (1) in very effective, (2) effective, (3) moderately effective, (4) of little effective, (5) not at all effective which are also scored 1 to 5, respectively. Statistical analysis was carried out using SPSS version 16. Finally a comparative analyses is supported by the attained survey results and is assessed keeping in light theories in KM and KMSs.

RESULTS OF THE STUDY

The response rate of this study was 78 %. The employee's structure is shown in table 1 below. The majority of participating employees in this study are males 56.4% and female 43.6%. Most of these employees have a new experience (1 to 5 years).

	%
Variables	
Gender	
Male	56.4
Female	43.6
Years of experience	
1-5 years	51.3
6-10 years	15.4
Over 10 years	33.3
Department	
Information Technology	12.8
Human Resources	7.7
Organizational Development	15.4
Credit administration	25.6
Compliance	10.3
Risk management	10.3
Statistics	17.9

*Table 1.*Employee Structure

Figure 2 below shows the percentage of employee's participant in the study based on 7 departments detailed in table 1 above. The highest percentage was from the credit administration department (25.6 %).

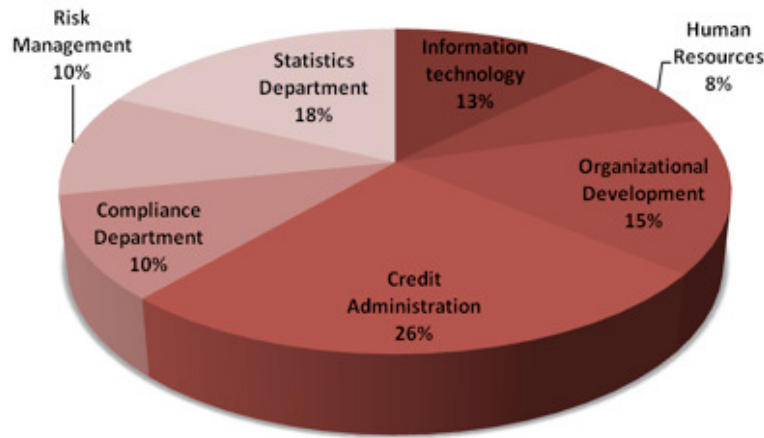


Figure 2. Participation rate per department

		In Use before 2 years	Used this year
1.1	Communications: employees share knowledge or information by:		
A	Regularly updating databases of good work practices, lessons learned or listings of experts.	15%	36%
B	Preparing written documentation such as lessons learned, training manuals, good work practices, and articles for publication.	31%	39%
C	Facilitating collaborative work by projects teams that are physically separated.	28%	33%
	Average used of KM practice OF Communication	25%	36%

1.2 Training and mentoring			
A	Provides formal training related to KM practices.	41%	28%
B	Provides informal training related to KM.	36%	23%
C	Uses formal mentoring practices, including apprenticeships.	13%	41%
D	Encourages experienced employees to transfer their knowledge to new or less experienced employees.	35%	38%
E	Encourage employees to continue their education by reimbursing tuition fees for successfully completed work related courses.	49%	28%
F	Offers off-site training to employees in order to keep skill current.	54%	28%
	Average used of KM practice OF Training and mentoring	38%	31%

Table 2. KM within an organization

	In Use before 2 years	Used this year
1.3 Policies and strategies		

A	Has a written KM policy.	30%	22%
B	Has a value system or culture promoting knowledge sharing.	24%	45%
C	Uses partnership or strategic alliances to acquire knowledge.	11%	21%
Average used of KM practice OF Policies and strategies		21%	29%
1.4 Knowledge capture and acquisition			
A	Used knowledge obtained from other industry resources.	31%	18%
B	Uses knowledge obtained from public research resources.	39%	36%
C	Dedicates resources to obtaining external knowledge.	33%	28%
D	Uses the internet to obtain external knowledge.	56%	26%
E	Encourages employees to participate in project teams with external experts.	49%	18%
Average used of KM practice OF Knowledge capture and acquisition		42%	25%

Table 3. KM practice within an organization

Table 2 above shows KM practice in use before two years and this year within an organization, KM practice was assessed by four main aspects being: (1) communication, (2) training and mentoring, (3) policies and strategies and (4) knowledge capture and acquisition. The highest average among four main processes is for knowledge captures and acquisition 42% while the lowest average attained was for policies and strategies 21%. However Table 2 above shows that

policies and strategies give more attention within this year the average increase to 29%. The second lowest average is for communication 25% which is increased by this year to 36%..

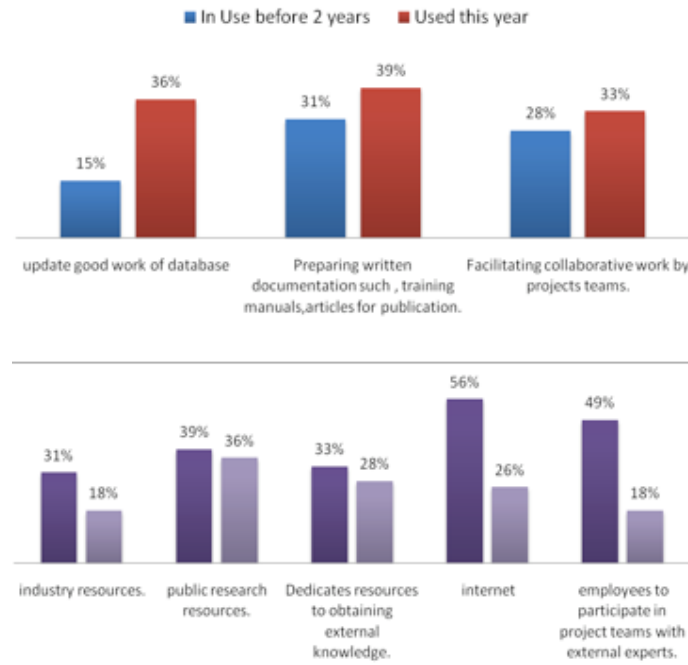


Figure 3. Communication

Figure 3 above shows that the organization is turning to a communication practice; the practice under this communication heading has increase this year.

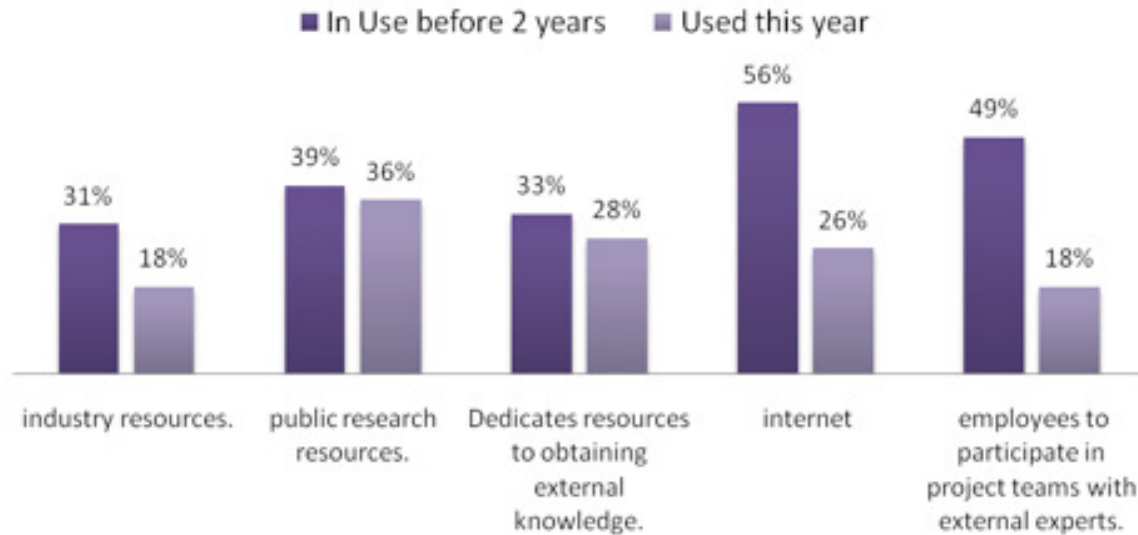


Figure 4. Knowledge capture and acquisition

Figure 4 above shows sharing knowledge and information within organization is one method used to manage knowledge within an organization. The figure also shows that most popular practice is using the Internet for external knowledge 56%, and for encourages employees to participate in project teams with external experts 49%.

Table 3 below shows reasons for adopting a KM practice, the reasons measured from four main aspects that represent in Knowledge integration sharing, knowledge capture and control, information management, and human resources management. The most important reason is to train employees so to meet strategic objectives of your organization (72%) which come under human resources management aspect, and second important reason is to protect the organization from loss of knowledge due to worker departure (64%) which comes under knowledge capture and control.

Please indicate the level of importance you attribute to each reason for using the KM practices currently in use in your firm or organization.

Very Important **Important** **Moderately** **Of Little** **Unimportant**

2.1 Knowledge integration / sharing:

		Very Important	Important	Moderately	Of Little	Unimportant
A	To help integrate knowledge within your organization.	61%	33%	3%	3%	0
B	To accelerate and improve the transfer of knowledge to new employees.	56%	39%	5%	0	0
C	Following merger or acquisition to help integrate knowledge within your new organization.	31%	39%	21%	5%	5%
D	To ensure that knowledge resident in all international work sites is accessible to the entire organization.	40%	39%	10%	10%	1%
E	To ease collaborative work of projects or teams those are separated.	33%	44%	15%	8%	0
F	To improve sharing or transferring of knowledge with partners in strategic alliances or joint ventures.	39%	33%	21%	5%	3%
G	To promote sharing or transfer of knowledge with suppliers.	8%	44%	23%	18%	8%
H	To promote sharing or transfer of knowledge	15%	39%	33%	10%	3%

with customers.

Average used of KM practice OF	35%	39%	16%	8%	3%
Knowledge integration / sharing					

Table 3. Importance of using KM Practice

Please indicate the level of importance you attribute to each reason for using the KM practices currently in use in your firm or organization.		Very Important	Important	Moderately Important	Of Little Importance	Unimportant
2.2 Knowledge capture and control:						
A	To improve the capture and use of knowledge from sources outside your organization.	44%	41%	10%	5%	0
B	To protect your organization from loss of knowledge due to worker departure.	64%	23%	13%	0	0
C	To identify and protect strategic knowledge present in your knowledge.	39%	56%	5%	0	0
D	To capture employee tacit knowledge and documented.	39%	36%	26%	0	0
Average used of KM practice OF Knowledge capture and control		46%	39%	13%	5%	0
2.3 Information management:						
A	To avoid information overload problems within your organization.	31%	49%	10%	10%	0
B	To help managers to focus their attention to key information.	44%	51%	5%	0	0

Average used of KM practice OF Information management **37%** **50%** **8%** **10%** **0**

2.4 Human Resource Management:

A	To train employees to meet strategic objectives of your organization.	72%	13%	13%	3%	0
B	To train employees to develop their human resources.	49%	41%	5%	5%	0
C	To encourage managers to share knowledge as a tool for professional promotion of their subordinates.	49%	41%	5%	5%	0
D	To increase employee acceptance of innovations.	31%	51%	15%	3%	0
Average used of KM practice OF Human Resource Management		50%	37%	10%	4%	0

Table 3 cont. Reason for using KM Practice

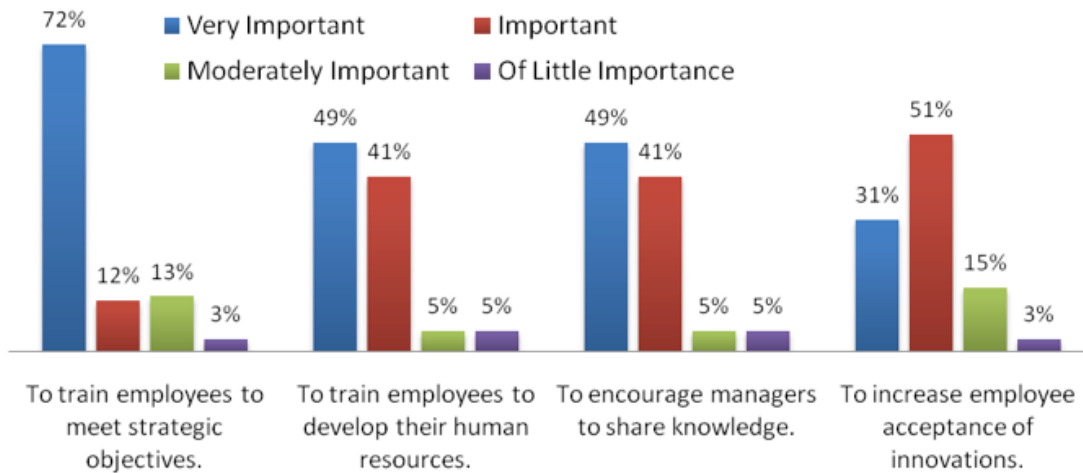


Figure 5. Human Resource Management

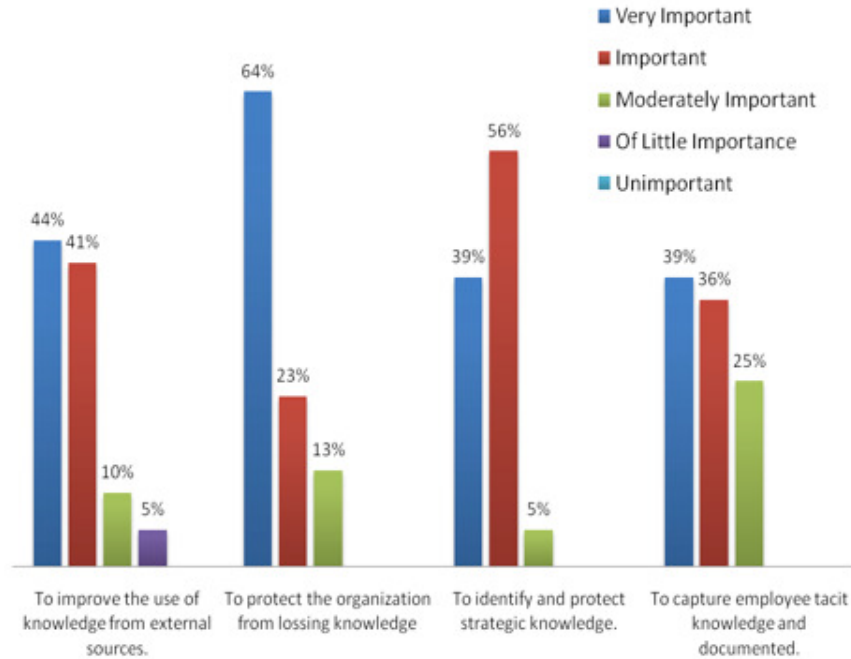


Figure 6. knowledge Capture and Control

Figure 5 above shows the percentage of importance level under Human Resources Management. Figure 6 above shows the percentage of importance level under Knowledge Capture and Control. Figure 4 and Figure 5 shows that driven forces to motivate KM practice in the organization is through focusing on human resource management and knowledge capture and control. Table 4 below shows result of using KM practice. The most effectiveness level is for improving employees' skill and knowledge 44%. Second most effective level is for improving employee's efficiency and productivity and for increasing adoption of products and services to client requirement. In addition, the results show that only one department has KM chief who assigns budget for a KM practice.

In the table below, please indicate the level of effectiveness you attribute to KM practices currently in use in your firm or organization as regards the following objectives.		Very effective	effective	Moderately effective	Of Little effective	not at all effective
3.1 Results of using KM practices						
Using KM practices:						
A	Increased our ability to capture knowledge from public research institutions.	18%	50%	21%	8%	3%
B	Increased our ability to capture knowledge from other businesses.	26%	26%	37%	8%	3%
C	Improved skills and knowledge of employees.	44%	36%	21%	0	0
D	Improved employee's efficiency and productivity.	39%	49%	13%	0	0
E	Increased our adaptation of products and services to client requirements.	39%	44%	13%	5%	0
F	Helped us add new products and services.	31%	44%	18%	8%	0
G	Alleviated the impacts of employee's departures.	18%	39%	26%	15%	3%

Table 4. Leve of effectiveness of KM Practice

CONCLUSION

The technological opportunities to improve interaction and increase collaboration in the organizations are expanding rapidly. There are many benefits of a well-designed KMS in an organization. These include saving time and effort to get knowledge (so all interested parties can use an organization's combined knowledge. Knowledge can be applied whenever and wherever needed), Therefore, after conducting our research on one of the leading Audit firms in Bahrain and analyzing the questionnaire, we found out that in order to be more beneficial to the Audit firm or any organization, knowledge, which is an organizational asset, should be managed carefully. In this case, there are four core features for KMS framework as proposed that should be considered and concerned as listed below:

1. *Infrastructure, content and portal.*
2. *Collaboration and learning.*
3. *Social capital, expertise and communities.*
4. *Business intelligence, integration and measurement.*

However, any organization that pursues KM policies is more likely to succeed if they complement technological aspects of KMS developments with the collaborative strategies which to allow people to work together at anytime and anyplace.

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