Abstract

Purpose –The objectives of this paper are fivefold:
    1. To ascertain whether Cypriot librarians are familiar with knowledge management;
    2. To identify the willingness of those professionals[1] to share and re-use knowledge;
    3. To investigate the role of information systems in facilitating knowledge sharing; and
    4. To identify organizational barriers that hinder knowledge production,
    5. To be used for future studies on the subject.

Design/methodology/approach – A quantitative research design was used. A questionnaire was distributed to Cypriot library staff, across seven libraries and their departments in Nicosia and Limassol. The questionnaires were given to all levels of employees in the organizational hierarchy.

Findings – The research supported the literature and showed that knowledge sharing is a major asset in organizational success and a valuable tool to contribute to organizational processes. The paper concludes that trust, knowledge management systems and incentives are a positive influencing factor in promoting knowledge sharing by boosting the motivation and performance of employees.

Research limitations/implications – This paper is the first attempt to study knowledge sharing and knowledge management in Cypriot libraries. The questionnaires returned constituted 45.83% of those distributed. The relatively small number of library staff working in Cypriot libraries allows us to undertake further studies which will aim to map knowledge sharing attitudes among Cypriot librarians. It would be interesting to extend the study to other developed European countries in order to understand similarities and differences in knowledge sharing and reveal how knowledge management is treated by other effective organizations.

Originality/value – This is the first research study of Cypriot librarians concerning knowledge management (KM) and fills the gap in the literature on the subject. The findings may be used as a basis that will assist local knowledge management professionals to develop a framework to explore knowledge sharing and knowledge management in similar organizations such as libraries, museums and archives.

Keywords Knowledge management, Libraries, Knowledge sharing, Cyprus

Paper type Research paper

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[1] By professionals, we mean all qualified librarians as well as postgraduate students doing their internship.

Introduction

Knowledge management is not as simple as it may sound of. It is a composite socio-technical system that combines various forms of knowledge generation, storage, representation and sharing (Ardichvili et al., 2006). More and more organizations nowadays want to overcome these "internal" barriers and make information available to all layers of the organization by developing systems that will facilitate this. Knowledge management systems (KMS) have been developed to help this process of knowledge transfer to be more accurate and effective, thereby giving the organization "something more". Yet, in spite of its appeal, people who use KM can sometimes inhibit these processes (Ardichvili et al. 2006). The success or otherwise of KMS depends upon the staff of an organization and their willingness to share and use knowledge. Therefore staff should be encouraged to use the systems. As Brown and Duguid (2000, p. 119) note: "knowledge entails a knower", and cannot transfer by itself; therefore, identifying key people who will share knowledge must be one of the primary issues in an organization. Sharing experiences with people who otherwise might never have to face them creates new bonds and a sense of collaboration between employees. Knowledge workers (Drucker, 1999) help each other to add new information to their "knowledge base" and enrich it, in order to use it instinctively for the accomplishment of a task or for an innovative idea (Davidson and Voss, 2002). Moreover, the thought of sharing experiences helps strengthen relations between organizational members. However the author was interested to know what happens when non-profitable institutions, such as libraries, want to incorporate the best ideas from knowledge management.

A number of studies have been conducted, which examine organizational learning, knowledge creation and knowledge sharing within organizations and their relationship to the motivation of employees (e.g. Gupta and Govindarajan, 2000; Tsai, 2002). However, the literature review seems to show a lack of empirical research on how librarians share and manage their own knowledge in their own organizations. In addition, the aim of this study was to investigate and determine how internal knowledge

transfers and is managed within libraries to identify what barriers exist that could hamper successful knowledge management.

Theoretical framework

Knowledge

Firstly, it is necessary to define knowledge and separate it from the other two familiar terms: information and data, in order to understand why it is so important to organizations. Knowledge is neither information nor data; rather, it is a unique group of insights, intuition and inspiration generated by continuous learning and thinking, that is gained through practice and cannot exist independently and has a greater value than information.

According to Sampson (2009), "…knowledge includes a depth of meaning that goes beyond the depth of the entries in a dictionary. " In short, knowledge cannot be "trapped" in the narrow confines of a printed or electronic media. Davenport and Prusak (1998, p. 5) define knowledge as "A fluid mix of framed experiences, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms."

Information is a set of organized data with meaning, purpose and relevance (Jashapara, 2004; Awad and Ghaziri, 2004) and can have an impact on the receiver's outlook or insight (Davenport and Prusak, 1998; Jashapara, 2004). Blair (2002) suggests that data are raw numbers and facts, in contrast with knowledge, which is actionable information that allows organizations to make better decisions and predict future outcomes (Jashapara, 2004). These distinctions between knowledge, information and data allow a greater understanding of the topic.

Consequently as Fahey and Prusak (1998) state, "if knowledge is not something different from data or information, then there is nothing new or interesting in the knowledge management." However, many researchers are unwilling to dissociate knowledge from information, or to understand the difference between them.

Many authors and researchers have developed frameworks to explain knowledge (e.g. Alavi and Leidner, 2001; Williams, 2006) but the most dominant theory is that which divides knowledge into "tacit" (knowing how) and "explicit" (knowing what) dimensions (Polanyi, 1962; Nonaka, 1994; Nonaka and Takeuchi, 1995). The interaction between these types is the key to knowledge creation (organizational knowledge). Therefore, it is useful at this point to examine the characteristics of these two very important concepts of knowledge management.

Tacit and explicit knowledge

Polanyi (1966) stated that "We know more than we can tell". Tacit knowledge, in contrast with explicit knowledge (e.g. abilities, developed skills, values, experience, "gut-feelings"', intuition, etc.), is difficult to store, transfer and recognize. It is rooted deep inside the human brain (internal) (Nonaka and Konno, 1998) and cannot be processed because of its subjective and intuitive nature. Thus, tacit knowledge is difficult to formalize and is therefore more difficult to express and be understood by others (Nonaka, 1994, 1998; Nonaka and Takeuchi, 1995). It is an invisible knowledge (Nonaka and Takeuchi, 1995) that is well hidden and ambiguous (Wilson, 2002), which is used to produce explicit knowledge (the process of conversion from tacit to explicit is called externalization (codification) and creates organizational knowledge).

Likewise, the effective transfer of tacit knowledge requires extensive face-to-face interaction (Nonaka and Takeuchi, 1995; Spender and Grant, 1996) and trust between people (Foos et al., 2006). Previous studies have indicated that trust has a multi-faceted nature (Dasgupta, 1988; Dasgupta and Serageldin, 2000) and affects the willingness of employees to share and use tacit knowledge (Holste and Fields, 2009). Basically, this type of knowledge may be highly significant in strategic planning performance (Bennett, 1998), as it can be an essential source of competitive advantage between organizations.

Polanyi (1996) and Nonaka and Takeuchi (1995, 2003) argue that explicit knowledge, which is standardized, systematic and personal, can easily be expressed, revoked reused, enriched and developed. Explicit knowledge can be represented by rules, words, numbers, scientific formulas, codified procedures, manuals and other structured forms (Polanyi, 1996; Kogut and Zander, 1996; Nonaka and Takeuchi, 1995, 2003). According to Nonaka and Takeuchi (1995, p. 59), this kind of knowledge can be documented, easily articulated or reduced to writing. It is often impersonal and formal in nature, and relatively easy to pass between individuals via appropriately designed methods and tools (Nonaka, 1994; Hedlund, 1994).

These two kinds of knowledge interact in the various activities of individuals and the social interaction that is achieved is always external (see Nonaka SECI model, knowledge spiral in Nonaka and Takeuchi, 2003). This is consistent with the ontological dimension, which argues that knowledge is produced only by individuals. Consequently, an organization is not able to create knowledge by itself, but is able to support and encourage the people who produce it. Therefore, the process of producing and sharing knowledge in a knowledge-centered organization is an endless circular flow, without an actual beginning and ending, in which individuals play the leading part.

Nonaka and Takeuchi (1998, 2003) suggested that the continuous conversion of knowledge, from tacit to explicit and back again, is the basis of organizational knowledge creation. However, the major challenge that organizations have to face is not the conversion between tacit and explicit knowledge (see also Spender, 1996) but how

to extract specific knowledge and add it to the knowledge base that already exists (Grant, 1996; Davenport, 1997). Therefore, managing knowledge is a pivotal activity and one of the key functions in modern organizations, as reported by a KPMG European study (2003). It can give competitive advantage to an organization in its particular sphere of activity (Alavi and Leidner, 2001).

Knowledge management

Organizations have long been looking for ways to break down barriers and make information available across enterprise and to all levels so that organizational performance can be improved. In the 21st century, through globalization, learning and knowledge, the two fundamental factors for success and continuous growth in modern organizations, and generally in communities of practice (CoPs) (see Wenger et al., 2002; Brown and Duguid, 2001), are knowledge and the ability to manage it effectively. Both have received significant attention in the knowledge management literature (Ardichvili et al., 2003; Gourlay, 2001; Davenport and Prusak, 1998).

Methods for knowledge management, used in conjunction with the technologies and processes of business activity, are now more significant than past criteria for success such as productivity, efficiency and quality management. These criteria have been replaced by creativity, innovation and knowledge.

This is consistent with Kanagasabapathy's, Radhakrishnan's and Balasubramanian's (2006) conceptualization of knowledge that
> "Knowledge management is a managerial activity which develops, transfers, transmits, stores and applies knowledge, as well as providing the members of the organization with real information to react to and make the right decisions, in order to attain the organization's goals".

In other words, knowledge management aims to acquire, organize, sustain, apply, and renew both tacit and explicit knowledge and share it (Davenport, 1997; Alavi and Leidner, 2001) with the right people at the right time (Holm, 2001), for organizational advantage.

Nonaka and Takeuchi (1995, 2003) point out that the term KM is often used loosely to describe management practices and approaches, which are conducive to the creation, processing, sharing of knowledge and "know-how" and that it is extremely difficult, even impossible, to implement management systems from something that is invisible, rooted deep inside the human brain (Hedlund, 1994).

On the other hand, with recent technological advances in information technology, the creation and sharing of knowledge is easier to achieve. Knowledge workers can exchange knowledge and ideas across the organization by using KMS. Hence, we are talking not only about technology but also about personal practices, techniques and processes within the organization (Davenport and Prusak, 1998).

In particular, KMS help professionals to give and collect knowledge more easily within the organization through improved communication processes, such as forums, blogs and intranets (Sampson, 2009; Hoof and Rider, 2004). Organizational effectiveness and performance can be successful only when individuals share knowledge (Argote and Ingram, 2000). As a result, in order to promote successful knowledge sharing, organizations implement KMS.

Alavi and Leidner (2001) and Skyrme (1999) note that KMS are based on the use of computer systems for the acquisition, sharing, representation and processing of knowledge. For instance, individuals can communicate online and share information with individuals from other groups or even seek knowledge from a repository (Davenport and Prusak, 1998). We therefore conclude (Baum and Ingram, 1988) that sharing not only helps individuals to adopt and better understand organizational culture but also helps the organization to sustain a competitive advantage. In addition, Davenport (1997, p. 2) indicates that KMS tools are very effective and can give new impetus to business. In their study Iyer and Ravindran (2009, p. 410-430) concluded that knowledge management systems do not contribute positively to an organization until knowledge is re-used. They suggest "that individuals do not only think about how incentives will affect them when deciding to contribute, but they also think about how incentives affect their co-workers."

The study design

Methodology

In order to meet the aims and objectives of the study, a quantitative approach was adopted and a questionnaire was used as the method of collecting data. The structure of the questionnaire was based on the themes identified by the literature review. A pilot questionnaire was distributed to four librarians in order to examine whether the participants understood the meaning of the questions and to minimize errors in the study. The questionnaire was then revised taking into consideration the comments from the pilot study. An explanation of the terms "knowledge" and "information" was included in each questionnaire in order to clarify meanings about the subject under investigation. All the questionnaires were distributed to and collected from Cypriot librarians by the researchers. Care was taken to ensure that the responses were anonymised.

The questionnaire consisted of 47 closed-ended questions and a five-point Likert Scale. Questions were grouped into three sections:
- demographics,
- basic information about knowledge management in the organization
- current practices and policies used for the creation, sharing and retrieval of knowledge management.

It is difficult to estimate the number of librarians working in Cyprus but according to the Cyprus Association of Librarians - Information Scientists (CALIS)

(http://kebep.blogspot.com) there are approximately 120. A total of 90 questionnaires were distributed to potential participants across seven libraries in Limassol and Nicosia in 2010 (about 75% of the total librarian population). 55 librarians (61% of the distributed questionnaires and 45.83% of the total librarian population) participated in this research.

Analysis

Of the total number of 55 respondents in this study, 42 (76.4%) of the participants were female and 12 (21.8%) were male. 20 (36.3%) of them had been working in a library for one to five years, 22 (40.2%) for six to ten years, while 6 (10.8%) for eleven to thirty years. 7 participants (12.7%) did not answer this question. In total, 42 (76.5%) had one to ten years of experience, showing that Cypriots libraries are improving their staffing profile by employing young professionals. The majority of library staff 36 participants (65.2%), had a Bachelor's degree in Library Science whilst 6 (10.9%) had a Masters in LIS and only 1 (1.8%) had a PhD in LIS. 8 (14.5%) had a first degree in another discipline.

In the second section of the questionnaire, respondents were asked if they thought that KM helped to improve their skills in their organization. The results confirmed that the majority of respondents, 46 persons (83.6%), were able to improve their skills and gain experience, and were able to use these skills to improve organizational effectiveness. As Yang (2007) concludes, knowledge sharing is more effective when employees have mechanisms which help them to store and document knowledge; thus they can positively and significantly contribute to organizational learning and effectiveness. It is evident that in order to achieve this goal employees must be equipped with the right skills and capabilities which will gradually enhance their organization.

The work of librarians is not stagnant, but the knowledge base is constantly changing as a result of the reliance on technology. Librarians continuously improve their skills in order to be up to date with new trends. Baum and Ingram (1988), in their extensive investigation of empirical research, concluded that the sharing of experience can have a beneficial effect on daily operations. Organizations are constantly looking for ways to ensure that daily operations are less time-consuming and take less effort. Therefore, the acquisition of new skills keeps the organization at the forefront of developments.

Furthermore, the results showed that the vast majority of respondents, 43 persons (78.2%), indicated that their organizations (in our case libraries) identify knowledge as a significant part of their assets and work.

Knowledge management and libraries

50 participants (90.9%) asserted that they were familiar with the term knowledge management. Only 5 of the responders (9.1%) indicated that they had never heard of this term.

Interestingly, contrary to the author's initial expectations, they found that 44 participants (80%) have never taken part in a seminar or workshop on KM, while 9 responders (16.4%) had. In fact, comparing the results with their knowledge about KM, there is indeed a big gulf between the two. There is no doubt that employees have a positive attitude toward KM, and there was a clear intention to learn more. The author believes that this gulf arises because of the unwillingness and inability of organizations to fit training (e.g. lectures, meetings, organized training sessions) into their daily operations. Besides, another possible explanation for this apparent paradox is that a seminar dealing with this subject has never taken place in Cyprus. Taking into consideration the findings of previous case studies conducted by Vazquez et al. (2009) and Ford and Chan (2002), lack of management support is one of the most important barriers to the efficient flow of knowledge throughout an organization.

The problem of lack of appropriate knowledge could be addressed if the libraries with the largest number of employees (e.g. the Library of the University of Cyprus or the Library of the Cyprus University of Technology) were to join forces to organize a training seminar or course to which librarians in other sectors could be invited. This would go some way to overcoming this deficiency of expertise.

Willingness to share knowledge with others and build trust

Cabrera and Cabrera (2002) stated that shared knowledge becomes a public good from which interdependent members of an organization could benefit directly whether or not they have contributed. Knowledge sharing is only successful when people are willing to share and not hoard their "stock of knowledge" (Nonaka and Takeuchi, 1995; Bontis et al., 2002). The incentives that encourage individuals to share are analyzed below.

The majority of respondents, 39 out of 55 (70.9%), were happy or willing to share knowledge with other colleagues whilst a minority, 9 participants (9.1%), mentioned that they were not willing to share in their working environment. According to Constant et al. (1994) the more the individual believes that information is a social norm and a socially expected behavior, the more they will be willing to share (Kwok and Gao, 2004).

Willingness to share experiences and knowledge is a voluntary action. Respondents were asked about the extent to which they were happy to share. 37 (67.3%) of the library staff were happy to do so, whilst 6 (10.9%) answered that they do so unwillingly. Thus, quite a high percentage of staff are not inclined to share knowledge but circumstances at work or/and managerial pressure drives them to do so. Twelve of the respondents (21.8%) did not answer this question. The proportion of the missing answers was quite high and one could surmise that this percentage is closer to the staff that is unwilling to share, since by cross-referencing the answers some pointed out their belief that *sharing is not a straightforward activity between colleagues*. Amongst those that share knowledge, 39 (70.9%) of the library staff were sharing knowledge frequently. However, the willingness of individuals to share, a supportive culture and an active

professional community are not always enough to remove all the barriers for knowledge sharing.

From the survey it is evident that the majority of library staff (47 respondents or 85.5%) agreed that they normally share knowledge and experiences with their peers at work because they trust them. Trustworthiness is the main factor that promotes a knowledge-sharing culture (see also Al-Alawi et al., 2007).

Knowledge Management Techniques

As noted previously, knowledge management systems and knowledge management tools bring knowledge possessors and knowledge seekers together in order to improve sharing of inexpressible tacit knowledge. As Nan (2008) defines in her study, sharing can be either virtual or face-to-face. Moreover, the results and discussion of this question are presented in two sub-sections.

Respondents were asked whether their organizations provide knowledge management techniques that facilitate knowledge sharing and to specify from a list how many they knew. Also, in the second part of the question respondents were encouraged to write about their own knowledge management techniques, in case that it was not mentioned in the list which was given by the researchers. Primarily, when participants were asked whether they knew if their organization had implemented knowledge sharing tools, 47 respondents (85.5%) mentioned that they had, whilst 8 respondents (14.5%) answered negatively. Table 1 shows the knowledge management tools/techniques that participants know and use.

Table 1. Knowledge management techniques

Knowledge management techniques	Answers	Percentage
Seminars	42	76.4
E-mail	41	74.5
Library's Website	41	74.5
Telecommunication	41	74.5
Face–to-face meetings	39	70.9
Forums	36	65.5
MSN	33	60.0
Wikis	32	58.2
Blogs	27	49.1
Intranet	17	30.9
Skype	9	16.4
Facebook	3	5.5
Group meetings	2	3.6
Portals	2	3.6

Table 1 reveals that the most frequent method of knowledge sharing identified by the participants was seminars with 42 answers (76.4%), followed by E-mail, the library's

website and telecommunication, with 41 answers (74.5%) respectively. Face-to-face meetings, with 39 answers (70.9%) followed by a variety of forums used by library staff, with 36 answers (65.5%) . There could be a number of reasons why information systems and technological means of communication are preferred, such as convenience, time and location differences, as well as trust in the system to deliver reliable information. However, this is in contrast to the opinion of Burk and Richardson (2001) of the importance of information systems, as they stated that such tools, where face-to-face contact is absent, are inefficient and ineffective and can cause misunderstandings. This situation seems to have changed, since our participants named techniques based on Web 2.0 and social networks. Those mentioned included forums, instant messaging, wikis, blogs and Facebook, placing social media firmly in their agenda for knowledge sharing with employees. On the contrary, "traditional" group meetings (2 answers or 3.6%) seem to be, as some stated, "a waste of time".

Knowledge sharing barriers and incentives

Table 2. Barriers to successful KM

Barriers	Answers	Percentage
Lack of participation	21	38.2
Lack of rewards	17	30.9
Lack of training	17	30.9
A lot of wasteful digital information	15	27.3
Lack of trust	11	20.0
Technological growth	10	18.2
Unwillingness to share knowledge	9	16.4
Knowledge management is not part of the everyday work	6	10.9
Not sharing is easier	4	7.30
Digital libraries	2	3.6
Competition	1	1.8
Reducing budget	1	1.8

It can be seen in Table 2 that lack of participation is the most commonly stated barrier, with 21 answers (38.2%), which shows a negative correlation between successful knowledge sharing and individuals. Lack of knowledge about using the tools and their benefits (inadequate training) (see also Grouard et al., 1999), lack of rewards and too much wasteful and non-reliable digital information (Davidson and Voss, 2002) were identified as the main barriers. Furthermore, unwillingness and the convenience of not sharing (because it is easier and not part of the weekday work) also adversely affected successful knowledge sharing. Moreover, respondents pinpointed the lack of a trusting culture as a contributing barrier (11 answers or 20%). Pan and Scarbrough (1999) emphasized that a trusting culture underpins successful knowledge sharing and according to Davidson and Voss (2002) (see also previous studies from Epstein, 2000; Nonaka and Takeuchi, 1995), hoarding useful information is harmful to the organization. Another barrier that was mentioned by one participant and which inhibits the good flow

of knowledge, as pointed out by Skyrme (2002), is the feeling of competition amongst coworkers.

Table 3. Factors that encourage librarians to knowledge sharing process

Incentives	Answers	Percentage
The idea of receiving knowledge	45	81.8
Reinforcing relationship with coworkers	22	40.0
Because they want to	15	27.3
Financial reward	12	21.8
Increases reputation in the organization	10	18.2

Some key factors that encourage and motivate knowledge sharing between individuals in an organization are shown in Table 3. "The idea of receiving knowledge" (45 answers or 81.8%), "Reinforcing relationships with coworkers" (22 answers or 40%) and "because they want to" (15 answers or 27.3%) were the main reasons for sharing.

Additionally, twelve participants (21.8%) also stated that "Financial reward" had a positive influence and endorsed their decision to participate. This corroborates the advice of Bartol and Srivastava (2002) and Lunney (2002) who all emphasized the importance of rewarding knowledge sharing. Many organizations are implementing reward programmes and invest a large amount of money in such activities because they are persuaded that these will help organizational effectiveness and values. Markus (2001), in a study conducted by the firm Booz Allen Hamilton, emphasizes that the motivation of consultants to share and re-use knowledge is reinforced by the presence of explicit rewards given by the organization.

Incentives can positively influence and motivate employees to contribute to knowledge sharing. They can encourage teamwork and continuous learning by suggesting that at the end they will get a reward. However, it should be noted that this does not only mean a financial reward but also a non-financial reward (recognition, satisfaction) given selectively to the employees for their high level of behavior or commitment. On the other hand, although financial rewards improve knowledge sharing (good salary= satisfaction=happiness, see Herzberg's theory motivation-hygiene), they are not always essential (Stevens, 2000). We conclude that most participants seemed to be encouraged to contribute to corporate knowledge.

When respondents were asked if they believed that the creation of a Wiki or a forum would make knowledge sharing easier in their organization, the majority agreed (74.5% for Wiki, 78.2% for Forum). According to Grace (2009), due to their being user friendly , Wikis can be a usable management tool that will save time and money for the organization. The findings concerning Wikis and forums indicate that library staff are well informed about the benefits of new technology, such as storing, sharing and reusing knowledge.

Thus, only 10.9% of the respondents stated that there were possibilities that *their coworkers will use their own ideas and take advantage of them*. This indicates that library staff seemed to trust their colleagues in sharing knowledge and only a small percentage mentioned the opposite, which might be because they had an unpleasant experience (use it for personal growth, recognition). Trust amongst co-workers leads to sharing information easily, without conflicts and strengthens the knowledge sharing environment.

Conclusion and recommendations

Knowledge management and sharing between individuals has been recognized to be the key to innovation and competitive advantage in organizations. This study has several important implications to explore. A quick glance at the results of the research reveals generally positive results concerning librarians' familiarity with and use of knowledge management within Cypriot libraries.

Firstly, the overall trend in the results is that librarians seemed to agree that knowledge management is a major contributor to organizational success. Therefore, developing knowledge management processes and applying high performance work practices is critical for obtaining high levels of organizational performance (Pfeffer, 1997) and will help knowledge aggregation. This is consistent with Eisenhardt and Santo's (2002) conceptualization of knowledge and their statement that sharing improves the performance of the organization.

Secondly, this study implies that although knowledge sharing by itself is a significant transaction process and a valuable tool to the organization, it cannot always provide the expected results and be considered as the "magic bullet" that makes KM a complete success. In order to achieve successful information exchange individuals should know how they will absorb and reuse knowledge. During this continuous process of sharing individuals learn to collaborate using technologies. These practices add to their experience and give them the ability to extend their skills, whilst at the same time helping to enhance the sharing culture of the organization. Whilst librarians are familiar with knowledge management, the results indicate that they are more willing to engage in knowledge sharing as long as more incentives are provided. This will also remove knowledge blocks and barriers (unwillingness) that are inherent in sharing amongst employees and facilitate greater knowledge and information sharing. Changing the attitude of employees and attempting to shape them into people who are committed to share knowledge seemed to be at the core of most issues.

Thirdly, librarians seem to share their experience and knowledge easily, voluntarily and frequently. More importantly, a number of notable conclusions can be derived from these findings. First of all, it is highly recommended that a successful and competitive organization employs willing individuals who like to share and understand the complex dynamic of successful knowledge sharing. It is equally important that, according to Swart and Kinnie (2003, p. 67), employees are hired at organizations not only for their

skills (technical ability), but also because they "fit in" with the organization's culture. Practices which are defined with high participation of the employees and knowledge sharing ethos are recognized and rewarded in order to further enhance the procedure (keep doing it for a long time, long-term performance). Furthermore, hedonic motivation (see also Amabile, 1997; Lindenberg, 2001), such as training and career progression, in conjunction with a nice work environment, can be significant and reinforce the socialization, responsibility and self-esteem of individuals and give them a sense of challenge and enjoyment in their work (Lam and Ford, 2010).

By using information systems, employees learn to collect and exchange knowledge without the physical barriers (limitations) of contribution (distance, time) in order to achieve the ultimate goal of organizational effectiveness. This study suggests that employees are pretty satisfied with the knowledge sharing tools at their disposal. 47 (85.5%) individual answers out of 55 (total of participants) implies that employees know and therefore use such tools. On the other hand, the study concludes that knowledge sharing techniques that are in use are, by themselves, not enough. From the survey it would appear that organizations need to provide a variety of new knowledge sharing tools based on Web 2.0 technologies, such as Instant Messengers (e.g. Skype) and Blogs, in order to ensure and enhance effective knowledge sharing.

Finally, the results indicate that amongst Cypriot librarians, communication is based on trust. However, there are some obstacles which block effective knowledge flow. One of the most common problems that influence the communication climate is the large amount of useless and irrelevant information that employees receive. Other barriers are the lack of interest in knowledge sharing and the lack of rewards. Another important reason is the failure of organizations to train employees in knowledge sharing. The researchers believed that they would uncover some unexpected and unusual opinions in their study. Other studies have revealed the view that knowledge is power and gives control to the knower, so it must be kept at an individual level. Another perception was that employees were not sharing their knowledge because they were afraid of making mistakes and being ridiculed. Nevertheless, as this study verified, these perceptions did not exist amongst Cypriot library staff.

Conclusively, Cypriot librarians reuse knowledge, trust their co-workers and understand that knowledge sharing has a positive influence to organizational effectiveness and gives a dynamic advantage to the organization. However, further research is needed using qualitative research methods in order to reveal more aspects in knowledge sharing and help us to better understand how information flows and disseminates in an organization. Future studies that will use multiple methods to obtain data will make it more possible to understand the relationship and trust between co-workers, knowledge sharing dilemmas and incentives, the effects of internal and external environments and the organizational culture in knowledge management. Further yet research into deeper aspects of knowledge sharing, into mechanisms that are used for knowledge exchange and into knowledge management systems will help future researchers to better

understand the role of successful knowledge sharing and its effectiveness in the organization.

Limitations and future research

This study is limited to the librarians who work in Cypriot libraries. The results are unique and there have been no prior experimental studies which have examined knowledge management and sharing in Cypriot libraries. The generalization of the findings of this study can also be applicable to other kinds of organizations over the world in which employees may have similar knowledge sharing issues.

However, there are some limitations to this study.

First, due to the lack of time, fewer completed questionnaires were received than initially expected. The author speculates that this is because of the ignorance that librarians have in the specific area of KM and the scarcity of employees to provide data. For instance, employees were hesitant to write an opinion when asked to do so and chose to leave the question incomplete. Future studies should be given more time and interviews undertaken; since the researcher will know the name of the participant, it might be easier to elicit a comment or an answer or even to promote a discussion.

Despite the limitation of data, the results may set a basis for developing a methodology to analyze organizational systems, cultures and employees in relation to knowledge production and sharing. However, the study needs to be extended to an international context and to other organizations and job types in order to come to more secure and trustworthy results.

Finally, the quantitative method which was adopted by the author in order to obtain data suggests that employees reuse knowledge, trust their co-workers and understand that knowledge sharing has a positive influence to organizational effectiveness and gives a competitive advantage to the organization. However, further research is needed using qualitative research methods. Future studies using multiple methods to obtain data will make it more possible to understand the relationship and trust amongst co-workers, knowledge sharing dilemmas and incentives, the effects of internal and external environment and organizational culture in knowledge management.

By examining more aspects of knowledge sharing techniques in depth, mechanisms that are used for knowledge exchange and knowledge management systems will help future researchers to better understand the role of successful knowledge sharing and their effectiveness in the organization.

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Questionnaire

Research for Knowledge sharing amongst librarians in Cypriot libraries

Knowledge: A fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower's. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, process, practices, and norms.

Information: Information is data that have been arranged in a meaningful way. This meaning can be useful, but does not have to be.

I. **Demographic information**

1. **Sex**: ☐ Male ☐ Female
2. **Library**: ....
3. **Institution**: ....
4. **Position**: ....
5. **Years Experience**: ....
6. **Education** :

☐ Postgraduate diploma in Librarianship and Information Science

☐ Master degree in Librarianship and Information Science

☐ Phd in Librarianship and Information Science

☐ Other (please specify) : ....

II. **Basic Information**

7. **Do you believe that your work environment is good?**

☐ YES   ☐ NO

8. **Are your suggestions/comments for the improvement of the library services taken into consideration by your organization?**

☐YES   ☐NO

9. **Do you believe that your contribution to the library is important?**

☐YES   ☐NO

10. **When you face work problems is the organization supportive?**

☐YES   ☐NO

11. **Do you think the organization treats the employees fairly?**

☐YES   ☐NO

12. **Can you gain new skills at your work environment?**

☐YES   ☐NO

13. **Are the assignments at your library fair?**

☐YES   ☐NO

14. **Do you believe that the library you work at recognizes knowledge as a fundamental requirement in organization?**

☐YES   ☐NO

> **14.1 If <u>YES</u> please indicate why.**
> …………………………………………………………………………

III. **<u>Knowledge management in your library</u>**

15. **Have you ever heard of the term Knowledge Management?**

☐YES   ☐NO

16. Have you ever attended a seminar on Knowledge Management?

☐YES   ☐NO

16.1 If YES please indicate the seminar or seminars which you have attended.
    ………………………………………………………………..

17. Do you share knowledge and experience with your co-workers;

A: With pleasure	☐YES	☐NO
B: Voluntarily	☐YES	☐NO
C: Systematically	☐YES	☐NO

18. Do you share knowledge because you trust the persons with whom you share it?

☐YES   ☐NO

18.1   If NO, what are the reasons that you do not share

    …………..…………………………………………………

19. Have you ever received help from other members of the library?

☐YES   ☐NO

20. Do you know if your library uses knowledge sharing techniques?

☐YES   ☐NO

20.1 If YES, which of the following techniques do you know? (You can choose more than one)

☐ Forum	☐ MSN
☐ Wikis	☐ Blogs
☐ E-mail	☐ Telecommunication
☐ Libraries web page	☐ Skype
☐ Intranet	☐ Face to face meetings
☐ Seminars	

☐ Other (please indicate): ....

....

21. Which of the following techniques that does not exist in your library would you like to be adopted?(You can choose more than one)

☐ Forum   ☐ Blogs
☐ Wikis   ☐ Telecommunication
☐ E-mail   ☐ Skype
☐ Libraries web page   ☐ Face to face meetings
☐ Intranet   ☐ Other (please indicate):
☐ Seminars   ....
☐ MSN   ....

22. How much time do you consider that an employee needs to mine knowledge in your library?

☐ Few minutes   ☐ Few days
☐ Few hours   ☐ Few weeks

21.1 Is there any educational program used by the library for this cause?

☐YES   ☐NO

23. Who do you believe are responsible for the knowledge creation in your library?

☐ All in organization   ☐ Only the manager of the library
☐ Only librarians   ☐Others (please indicate):
                                  …………………………………………………………….

24. Do problems in your library exist such as:

A:knowledge   ☐YES   ☐NO
B: information   ☐YES   ☐NO

24.1 If <u>YES</u> with what do you agree:

☐ Lack of information

☐ Too much information

☐ Loss of critical knowledge due to the absence of an employee from the library

☐ Poor knowledge management in the library

☐ Other (please indicate): ....

25. What is the library's opinion about knowledge management? (You can choose more than one)

☐ Has never heard of it

☐ They are trying to do something but under a different name

☐ It is a critical part of the organization

☐ It is something that can give advantage to the organization

☐ Other (please indicate): ....

26. What is your opinion about the explicit knowledge in your library? (for example blogs, wikis, e-mails etc.)

☐ It is important, relevant and contemporary

☐ It is important, relevant but not frequently renewable

☐ It is irrelevant and without any use

☐ Other (please indicate): ....

26.1 Do you believe that digitalization and new technologies have affected explicit knowledge in your library?

☐YES   ☐NO

Please explain your answer: ………………………………………………………………….

27. Which of the following describes the culture of your library towards knowledge sharing? (You can choose more than one)

☐ The basic values and principles support knowledge sharing

☐ It has an open, encouraging and supportive culture

☐ They believe that knowledge sharing is a teamwork and all must contribute

☐ They believe that knowledge sharing must be done by newcomers and there is no need for it

☐ Other (please indicate): ....

28. What in your opinion is the biggest barrier in successful knowledge management? (You can choose more than one)

☐ Lack of participation   ☐ A lot of wasteful digital information

☐ Lack of trust   ☐ Technological growth

☐ Unwillingness to share knowledge   ☐ Digital libraries

☐ KM is not part of daily work   ☐ Lack of rewarding

☐ Lack of training   ☐ Not sharing is easier

☐ Other (please indicate): ....

29. What problems do libraries face by using technology in knowledge management? (You can choose more than one)

☐ Lack of training

☐ Complicated system

☐ Lack of time

☐ Unsuccessful due to technological problems

☐ Other (please indicate):
    ………………………….............................

30. Do you believe that knowledge sharing could lead other members of the organization to solve problems?

☐YES   ☐NO

31. Do you prefer sharing knowledge with people that have a high reputation in the organization?

☐YES   ☐NO

31.1 If <u>YES</u>, please indicate why

………………………………………………………

32. Do you believe people liked helping their colleagues and contributing in the library for personal gain?

☐YES   ☐NO

33. Which of the following factors motivate you in knowledge sharing in your library? (You can choose more than one)

☐ The idea of acquiring knowledge   ☐ Because I want to
☐ Rewards/Bonus   ☐ Increase the reputation
☐ Strengthen relationship amongst co-workers
☐Other (please indicate): ....

34. Which do you think are the main advantages in knowledge management? (You can choose more than one)

☐ Employees can be better professionals
☐ Employees are more effective
☐ Employees have access to a bigger intranet
☐ Employees can be more productive
☐ Employees have access to significant information
☐ Other (please indicate): ....

35. When you have information in subjects relevant to librarianship do you do as much as you can in order to share it with others?

☐YES   ☐NO

36. Do you try staying up to date by scouting information in different knowledge systems and data bases?

☐YES   ☐NO

37. How important do you consider the role of effective knowledge sharing through the better operation of the library? (Please put the number which represents your opinion in the box)

Strongly Agree | 1   2   3   4   5 | Strongly Disagree

1) Increase competitive advantage   [ ]
2) Innovation   [ ]
3) Employees advancement   [ ]
4) Better decisions   [ ]
5) Better workmanship   [ ]
6) Faster response in solving organizational issues [ ]

38. Do you believe the creation of a Wiki would make knowledge management easier in your library?

☐ YES   ☐ NO   ☐ Do not know

Please indicate: …………………………………………………………………………

39. Do you believe the creation of a Forum would make knowledge management easier in your library;

☐ YES   ☐ NO   ☐ Do not know

Please indicate: ………………………………………………………………………

40. Do you believe that sharing your knowledge with others will make them steal your ideas and take the reward for themselves?

☐YES   ☐NO

Please indicate: …………………………………………………………………

Thank you for your participation