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Relationship between Knowledge Management Practices and Library Users' Satisfaction at Malaysian University Libraries: A Preliminary Finding

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Abstract: Knowledge Management Practice (KMP) and Library Users' Satisfaction (LUS) are two vital aspects of Knowledge Management (KM) which play an important role in creating organizational value. Most organizations, such as University Libraries focus on enhancing their capability of knowledge processes to create new knowledge. The aim of this paper is to test empirically levels and types of KM practice applied at Malaysian university libraries. Based on 35 questionnaires through Facebook, a survey was administered to a Lead User group in libraries (PhD candidates) in Malaysia. This is to elicit opinion of the prime users on the linkage between Knowledge Management Practice (KMP) and Library Users' Satisfaction (LUS). SPSS software were utilized to analyze research data using reliability analysis and Pearson correlation. Results obtained show that Knowledge Management Practice (KMP) has positive influence on the Library Users' Satisfaction (LUS). However, a meaningful linkage was observed between Library Users' Satisfaction (LUS) with two vital constructs of Knowledge Record (KRe) and Knowledge Preserving (KPr). The main contribution of the paper is to provide groundwork empirical evidence about the linkage between Knowledge Management Practice (KMP) and Library Users' Satisfaction (LUS) at Malaysian university libraries. Moreover, it reveals what is the most effective KM Practice specifically knowledge process. For this relationship purpose, it provides organizations with some preliminary implications in order to shape their knowledge management practices.

Key words: Knowledge Management Practice; Malaysia, Knowledge Record; Knowledge Preserving; University libraries; Library Users Satisfaction.

INTRODUCTION

In recent decades, knowledge management (KM) has been perceived as another potential viable response to the challenges that the Library and Iinformation Science profession is facing in a continuously changing environment (Sarrafzadeh, Martin, and Hazeri, 2010). There are a number of definitions related to knowledge management practice in libraries. Tandale, *et al.* (2011) defines KM is to create a process of valuing the organization's intangible assets in order to best leverage knowledge internally and externally. Knowledge management, therefore, deals with creating, securing, capturing, coordinating, combining, retrieving, and distributing knowledge. Skyrme and Amidon (1997) defines KM as a "process or practice of creating, acquiring, capturing, sharing, and using knowledge, wherever it resides, to enhance learning and performance in organizations." Brendan (1999) broadly defined KM as a acquisition, sharing and use of knowledge within organizations, including learning processes and management information systems (MIS) or, more specifically, the explicit and systematic management of vital knowledge associated with processes of creating, gathering, organizing, diffusion, use and exploitation. On a similar note, White (2004) defines KM as "a process of creating, storing, sharing and re-using organizational knowledge (know-how) to enable an organization to achieve its goals and objectives". In a similar view, KM is seen as distinct from both librarianship and Information Management (IM), as it includes knowledge creation and knowledge sharing, and the interplay of tacit and explicit, individual and collective knowledge (Hammer, Leonard, and Davenport, 2004; B. Martin, Hazeri, and Sarrafzadeh, 2006). However, in this study KM defines as "process of creating, acquiring, capturing, sharing, recording and preserving" knowledge.

Today, library has a lot of collections that they need to manage and offers their services and facilities to their users. It is very subjective to say that library could provide their user satisfaction when dealing or borrowing library materials. In an academic institution, library will remain central to the management of scholarly communication. It fulfills the traditional role of information supply or document delivery (Goswami, 2009). McInerney (2002) stated that knowledge is acquired actively and dynamically through sensory stimulation, listening to and observing others, reading, being aware of feelings, life experience, etc. It is this

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dynamic nature of knowledge that leads to the question of how something in flux, in movement and action, can be managed. With the transformation of knowledge management practice at university libraries, there are several KM practices need to emphasize to demonstrate the significant relation among processes. (Aharony, 2011; Alavi, Kayworth, and Leidner, 2006; Alavi and Leidner, 2001; Gold, Malhotra, and Segars, 2001; Ipe, 2003; Meng and Fei, 2003; Nonaka, Byosiere, Borucki, and Konno, 1994; Nonaka and Takeuchi, 1991; Townley, 2001). Knowledge is composed of the tacit experiences, ideas, insights, values and judgments of individuals as well as for the analysis of information and data. However, it may change direction and bringing more opportunities in libraries to grow or expand (Jawadekar, 2011). The processes of knowledge coupled with understanding and context in LIS urged on how libraries expand the processes in KM such as knowledge creation, knowledge acquisition, knowledge capture, knowledge sharing, knowledge record, knowledge preserving and so forth. Therefore, the question "how" in this stage is reflected to the libraries itself how they manage the growing or expand of knowledge processes inside the building. As the practice of Knowledge Management (KM) spreads across the world, issues concerning knowledge processes in the library have moved to the forefront. More specifically, the objectives of this paper are formulated as follow:

1. To indicate the type of knowledge management practices in the library.
2. To compare a significant relationship between knowledge creation, knowledge capture, knowledge acquisition and knowledge sharing associated with Knowledge management practice.
3. To recognize a significant influence of the relationship between KM practices and library users' satisfaction.

Related Work:

The first practice needs to be elaborated is Knowledge Creation. Maponya (2004) states that knowledge in the context of academic libraries can be created through understanding the user needs and requirements as well as understanding the university's curricula. Recent trends in education emphasizing collaboration and group study are causing a demand for new resources. The need for "knowledge creation" workspace has encouraged librarians, faculty, and computer specialists to work together to provide the necessary technology, information, and services (Gayton, 2008; MacWhinnie, 2003). Libraries have always provided study space, and are now including more group study facilities that have technology for access to both physical collection and electronic resources, as well as productivity software that allows students to work together to complete shared assignments. Besides, Lee (2005) and Townley (2001) found that the thrust of knowledge management is to create a process of valuing the organization's intangible assets in order to best leverage knowledge internally and externally. With this regards, a growing amount of information and knowledge involves capturing an organization's goal related knowledge as well as knowledge of it products, customers, competition, and processes, and then sharing that knowledge with the appropriate people throughout the organization. Further, knowledge management seeks to support communities of practice in creating and using knowledge. Academic libraries as constituents of the parent university should rethink and explore ways to improve their services and become learning organizations in which to discover how to capture and share tacit and explicit knowledge within the library. The changing role of academic librarians as knowledge managers emphasizes the need to constantly update or acquire new skills and knowledge to remain relevant to the today's library environment. Academic libraries may need to restructure their functions, expand their roles and responsibilities to effectively contribute and meet the needs of a large and diverse university community (Maponya, 2004). It is important to notes that for organization such as library need to determine who knows what in an organization and how that knowledge can be created and shared. For the purpose of this research, knowledge management is thus, according to Skyrme and Amidon (1997) state that the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organization and applied. Maija-Leena and Mirja (2005) stresses that new knowledge is based on an organization's internal information and on knowledge embedded in people/user and organizational structures and processes. This includes tacit and cultural dimensions of organizational knowing that are combined with the external information and knowledge for knowledge creation. However, interaction is a crucial part in these processes, and even internal knowledge can be combined in a totally new manner as well. Besides, it is extremely important to acquire new external information to select and assess it on the basis of its potential usefulness in research. Because university libraries are responsible for creating, acquiring, selecting, recording, preserving and providing access to the latest external knowledge for the whole academic community, they have traditionally had an important role in generative knowledge processes. However, managing all these process requires active collaboration with various user groups.

Knowledge Acquiring is crucial to the success and development of a knowledge-based system in university library. Gorniak-Kocikowska (2001) believes that knowledge has become an instrument which everyone could and should use. Therefore, the trend of libraries seems to be an acquisition of skill related to various aspects of computer technology and almost anything possible. The reason for this that much knowledge is stored in the

individual heads and it is often lost if not captured elsewhere. The surest way to avoid collective loss of individual memory is to identify the expertise and the skills of staff and capture it. On top of that, participation of librarians are actually quite interesting in consulting their colleagues in conversion of tacit knowledge into tacit and/or explicit knowledge (Parirokh, Daneshgar, and Fattahi, 2008; Wagner, Otto, and Chung, 2002). Like many things else, it is likely to be a combination of both (tacit/explicit). Thus, libraries as trusted institutions should play an important role in this respect. Therefore, librarians need to be conversant and prepared for active participation in this area (Choy, 2007). As a results, Maija-Leena and Mirja (2005) revealed that university libraries be able to acquire only a small portion of the research literature published in the fields of their home universities. Besides, performing their traditional tasks of providing or access and instruction, libraries negotiate license agreements and form consortia for the acquisition of electronic materials. Academic staffs are the primary producers of electronic teaching materials. However, libraries have an excellent opportunity to support acquisition and access to these materials by digitalizing printed teaching materials and by taking responsibility for the copyright agreements. As experts in a variety of activities related to information and digital materials, librarians can contribute to the knowledge of lecturers. They can also track down, acquire, and introduce new electronic publications of the latest research findings including those still unknown to academic staff. Librarians should not suppose that academic staff know what librarians do, but they should make every effort to interact with them in order to build good relationships (Ducas and Michaud-Oystryk, 2003). As a result researchers, teachers and students may become more aware of librarians' skills and abilities.

KM is about enhancing the use of organizational knowledge through sound practices of KM and organizational learning (B. Martin, *et al.*, 2006; J. Martin, 2009; Mavodza, 2010). Today, library is fully capable of developing and leveraging critical knowledge to improve their performance. Zack (1999) states that library becoming so complex that knowledge is fragmented, difficult to locate and share, redundant, inconsistent or not used at all. Even knowledge and expertise that can be shared is often quickly made obsolete. According to Williams, *et al.*, (2004) "when information and knowledge flow can be captured, organized and made accessible for reuse, there exists the potential for subsequent creation of new knowledge". Mavodza (2010) and Daneshgar and Bosanquet (2010) states that to facilitate the capturing and transferring of both formal and informal knowledge must through knowledge networking or system. Ani, *et al.*, (2005) found that the use of information technology (computers, telecommunication, reprography, etc.) has a special role in the modernization of library practices. With ICT, such mechanism as electronic cataloguing, electronic online public access catalogues (OPACs), electronic acquisition and serials control, electronic circulation functions, electronic distribution of commercial publications, electronic availability of raw data, multimedia information delivery systems, digitized collections and online textbooks are all now practicable with a higher degree of user satisfaction (Ani, *et al.*, 2005; Siddike, Munshi, and Sayeed, 2011; Tripathy, Patra, and Pani, 2007). Daneshgar and Bosanquet (2010) notes that there is a vast amount of knowledge relating to the Library's customers. Therefore, library management is now exploring more effective methods for organizing knowledge. It is being captured to facilitate knowledge management activities such as evaluating, sharing, and storing of the customer knowledge within the 'library'. The 'Library' expects that knowledge management activities will build a greater understanding of customers and their requirements. Hence, these requirements will hopefully lead to the delivery of more appropriate and timely services towards users' satisfaction. On the other hand, the major challenge of managing knowledge is less its creation and more its capture and integration (Davenport, De Long, and Beers, 1998). However, sometimes for understanding the user needs and being able to provide adequate services or to match services with suitable philosophies and theories it is crucial for librarians and decision makers within the library to share the knowledge which was captured from the previous phase with some experts in LIS or other related disciplines (Parirokh and Fattahi, 2009). Therefore, above all knowledge has to be captured using proper documentation, through mentoring, training, surveys, etc.

Academic libraries as constituents of the parent university should rethink and explore ways to improve their services and become learning organizations in which to discover how to capture and share tacit and explicit knowledge within the library (Maponya, 2004). The changing role of academic librarians as knowledge managers emphasizes the need to constantly update or acquire new skills and knowledge to remain relevant to the today's library environment. Academic libraries may need to restructure their functions, expand their roles and responsibilities to effectively contribute and meet the needs of a large and diverse university community (Gurteen, 1999; Hansen, Mors, and Løvås, 2005). According to Gurteen (1999), it is also fundamental about sharing knowledge and putting that knowledge to use. Thus, to create a knowledge sharing culture it needs to encourage people to collaborate and work together more effectively, to collaborate and to share ultimately to make organizational knowledge more productive (Heiman and Nickerson, 2004). Indeed, sharing "tacit knowledge among multiple individuals with different backgrounds, perspectives, and motivations becomes a critical step for organizational knowledge creation to take place" (Nonaka and Takeuchi, 1995). However, it is necessary to establish what sharing knowledge really means (Riege, 2005). This implies that not all employees need to share knowledge, because it would not be re-used or applied. A study done by Wabwezi (2011) revealed that knowledge sharing does not stop at contributing to the realization of innovation but also continues after the

innovation is achieved to effect its implementation or adoption. The findings of the study also highlighted the factors that affect knowledge sharing at the university and these included organizational culture, incentives for innovation, availability of social meeting places commitment from management and sensitization. A research findings by Teh and Yong (2011) stresses that the practitioners must be aware the presence of individuals' attitude toward knowledge sharing may not lead to intention to share knowledge. Management should create a supportive atmosphere in which knowledge can be shared via effective formal communication (e.g., office's SharePoint portal server) and informal communication (e.g., forum and brainstorming sessions). In fact, facilitating knowledge sharing is a complicated task, as one of the major challenges concern is the willingness of organizational members to share their knowledge with other co-workers. Furthermore, it is also happen among librarians, lecturers and/or management in academic libraries. A survey results by Pengshan and Yongqin (2011) indicates that 85% of respondents reported 'Very Great' or 'Great' satisfaction. The study indicates that library is the core of Information Common (IC), so that library can build such an environment to encourage readers or customers sharing their knowledge. In fact, library also can take advantage of the potential during the course of the knowledge sharing to fulfill their user satisfaction. Nevertheless, there are two novel processes which have to be considered in this study. Considering the importance of Knowledge Record (KRe) and Knowledge Preserving (KPr) in knowledge process, these two processes could be an important variable, which not much discussed in literature. This novel variables hope may help to predict why people choose to record and preserve knowledge in some contexts of KM practices especially at Malaysian universities library toward their users' satisfaction.

Gandhi (2004) found that numerous employees' in organizations were asked to record their tacit knowledge and explicit knowledge (Davenport, *et al*., 1998; Dougherty, 1999; Nonaka and Takeuchi, 1995), whereby they have to write down step-by-step for everything they did. However, the main issue to be consider is that do they (i.e., individual or employee) really care to record their tacit and explicit knowledge?. Several employees were forced by organization themselves to record knowledge (Smiraglia, 2002) they had internalized as experience or memory. Knowledge of how records are used is therefore also important to be able to develop and design (Borglund, 2008; Borglund and Öberg, 2008; Yeo, 2005). As such, successful KM initiatives could help organizations to establish their internal benchmarks, identify and record best practices, and create an environment of continuous learning. KM systems implemented in libraries so far have not achieved these goals. Richardson (1995) agree that librarians need to learn from the process and avoid repeating mistakes, it is vital to record what worked, what did not work, which steps in the process were useful, and what would they do differently next time. According to Al-Hawamdeh (2002) not all types of knowledge can be recorded and codified as information. Branin (2003) agreed that librarians need to extend their expertise in creating, acquisition, dissemination selecting, organizing, record, preserving and etc. (Anjanappa, Kattimani, and Jange, 2009; Cho, *et al*., 2009; Delsaerdt, 2008) whereby they must willing to get outside the routines and the walls of the traditional library and work more directly with technologists, faculty, and students. Therefore, when discuses about knowledge management practice, it is clearly dealing with a set of complex issues that are interrelated and cannot be segmented (Al-Hawamdeh, 2002). A study done by Garcia (2011) revealed that the business of libraries is facilitating knowledge transfer through the effective preservation and organization of public documents and public knowledge records to ensure that it social utilization so knowledge is effectively transferred. For that, they provide monitoring, storage, retrieval, and users' information empowerment services, and have a managerial structure, to ensure the appropriate leadership, planning, and administration of this. The important point to note by Harries (2009) is that, here (i.e. Library) dealing not just with records of actions, but also with knowledge processes and information, given meaning through content and context, and put into action working. According to author, "… If we believe that a core principle of records is that they improve accountability and good governance, then we need to consider how records management can account for, and incorporate, this social dimension and its role in the social production of knowledge. Within and between different professional communities; processes which both create and use those records". Nevertheless, the approach for records created in the course of day-to-day business of the universities was to stored and kept in hard copies as evidence of an action, decision or process. The process of record keeping provides a framework for keeping, maintaining and providing for the disposition of records and what is contained in them. Therefore, the process intended to benefit all members of staff by facilitating continuity and evaluation of services and preserving privacy (Egwunyenga, 2009).

It is important to state that Knowledge Preservation also has significant with knowledge management practice in the knowledge process. Haahr (2002) states that the preservation of knowledge, in the form of libraries allowed such communities to 'exist' despite the temporal separation of some of the members. To preserving the knowledge in the library (Dougherty, 1999), there has to be a voluntary action on behalf of the individual. Anderson (1996) found that university (i.e. Academic library) could contribute to the operational of the service through purchasing and operating a portion of the hardware and software required for the service and/or via financial support towards the preservation of key material, such as certain books and journals, much like the collections now found in physical form in university libraries are built via the purchase of selected

books and journals. The process of knowledge capture, sharing, record and preserving approach is technology-dominated (Hildreth and Kimble, 2002). With the increased interest in knowledge preservation that cannot be captured and recorded, a number of researchers (e.g. (Coffman, 2010; Igbeka and Ola, 2010; Tasmin and Woods, 2008) have begun to realize that library management has poses significant challenges and the existing approaches to KM are not adequate. A study done by Ismail (2006) indicates that library preservation programs take into consideration factors such as the physical environment in which information resources are housed; disaster control; pest control; handling of the resources by library staff and users; access control; conservation; reformatting; routine maintenance; library security and reader education. Librarians must preserve for posterity and therefore, good collections:

- Attract scholars who may come to the university to teach, for sabbatical or pursue higher degrees;
- Attract requests for document supply;
- Attract gifts from scholars and book collectors because of the confidence in the Library's preservation and access policies; and
- Make librarians proud and happy that they have discharged their duties and responsibilities well.

Preservation is a professional and management responsibility. There is no access without preservation and libraries can only create and maintain bibliographic records for materials that are available. Catalogue records do not mean a thing, if libraries cannot provide the materials they describe. Nothing can be more frustrating to the researcher than to spend time at the catalogue noting call numbers but not being able to get the materials when they go looking at the stacks. They will vent their frustrations on library staff and there is nothing that library staff can do except to apologize and offer to search for the materials that they themselves fear are no longer in the library (Ismail, 2006).

Recently, there are many knowledge processes that have been introduced by prior researchers. However, only six knowledge processes were selected based on a comprehensive literature review such as Knowledge Creating (KCr), Knowledge Acquisition (KAc), Knowledge Capturing (KCa) and Knowledge Sharing (KSh). In fact, another two novel processes, which found to fulfill the gaps are Knowledge Preserving (KPr) and Knowledge Record (KRe). Furthermore, the linkages of KM practice (i.e. KCr, KAc, KCa, KSh, KRe and KPr) are becoming a main variables contributing to KM Practice against Library Users' Satisfaction.

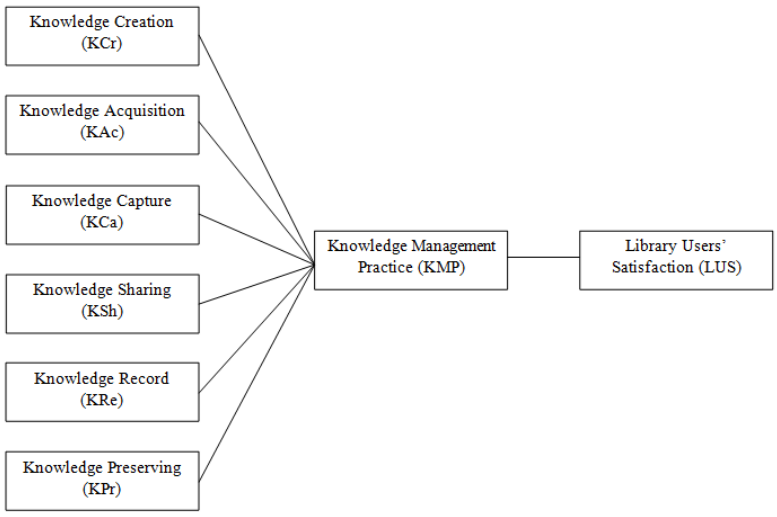

Fig. 1: Theoretical Framework of KM Processes.

The novelty classifications of KM process allow researchers to compare and analyze the process when dealing with KM process to fulfill their user satisfaction in the library. Karadsheh, *et al.* (2009) stated that many of the model are broad enough to provide a complete analysis of the knowledge flow in the organization. Therefore, the proposes of novelty KM process could improve the existing KM processes to provide the Knowledge Creating (KCr), Knowledge Acquisition (KAc), knowledge Capturing (KCa) and Knowledge Sharing (KSh), Knowledge Record (KRe) and Knowledge Preserving (KPr) has illustrated in figure 1. Therefore, all six processes need to be linked with KM practice to perceive whether it has a significant impact against Library Users' Satisfaction (LUS) at university libraries. Nevertheless, these processes need to be in place or cultivated strongly for the implementation of Knowledge Management practices to be a success (Al-Hawamdeh, 2002).

MATERIALS AND METHODS

The selected population for this study was Malaysian University Libraries. The sample size of this pilot test is approximately 35 PhD candidates who are the lead user in Malaysian University Libraries. A total number of 35 set of questionnaires were distributed randomly to the PhD students who visited the library for a period of two weeks. This implies that each student who went to the library has the same chance of being selected to answer the questionnaire (Sekaran, 2003). Respondents were requested to return the filled-in questionnaires to the library counter. A total of 35 filled-in questionnaires were returned which showed an overall response rate of 100%.

Almost all lead users are PhD candidates. Most of the lead users answered to the pilot survey questionnaires 51.4% were male while 48.6% of them were female. This shows that most of the lead user should have a good knowledge about library such as Knowledge Creating (KCr), Knowledge Acquisition (KAc), Knowledge Capturing (KCa), Knowledge Sharing (KSh), Knowledge Record (KRe) and Knowledge Preserving (KPr). The result indicates that 100% of the lead user rated "Yes" that KM Practice should be applied in the library. In fact, the result in Figure 2 indicates that 22.9% of Knowledge Sharing (KSh) were rated in the first place types of KM practice most applicable in the library. While, there is 20% of Knowledge Acquisition (KAc) and Knowledge Preserving (KPr) were rated in the second place. However, 17.1% of Knowledge Record (KRe) was rated in the third place, 14.3% of Knowledge Creating (KCr) in the forth and 5.7% of Knowledge Capturing (KCa) were the last.

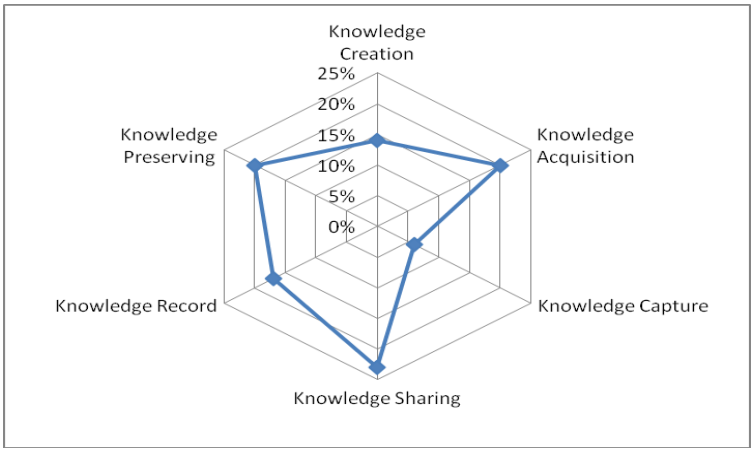

Fig. 2: Types of KM practices.

Figure 3 indicates that only 9 out of 20 Malaysian Universities participated in this pilot survey. The majority of the Lead Users 34.3% were from Universiti Tun Hussein Onn Malaysia (UTHM), 25.7% were from Universiti Utara Malaysia (UUM). They were followed by Universiti Putra Malaysia (UPM) 14.3%, Universiti Kebangsaan Malaysia (UKM) 8.6% and Universiti Teknologi Malaysia 5.7%. Others, Universiti Sains Malaysia (USM), Universiti Teknologi MARA (UiTM), Universiti Islam Antarabangsa Malaysia (UIAM) and Universiti Malaysia Sarawak (UNIMAS) were 2.9%.

Table 1 indicates that reliability assessment was made. Cronbach's Alpha coefficients were computed for each factor to access reliability of measurement. The coefficients of Alpha for all factors indicated values raging from 0.806 to 0.911. Hair, *et al.* (2006) stated that Cronbach's Alpha values of 0.60 to 0.70 are regarded as "the lower limit of acceptability". Thus, this study showed that all of the scale reliabilities in pilot test results were above accepted range of the threshold values. In fact, the questionnaire was pre-tested on 35 PhD candidates at Malaysian University Libraries to evaluate the questionnaire's validity with regard to clarity, bias, ambiguous questions, and relevance to the respective libraries.

Table 1: Reliability Analysis of Each Factor.

Knowledge Management Processes	Cronbach's Alpha	No. of Indicators
1. Knowledge Creation (KCr)	0.825	6
2. Knowledge Acquisition (KAc)	0.841	5
3. Knowledge Capture (KCa)	0.817	5
4. Knowledge Sharing (KSh)	0.806	6
5. Knowledge Record (KRe)	0.911	6
6. Knowledge Preserving (KPr)	0.870	5
7. Library Users Satisfaction (LUS)	0.909	10

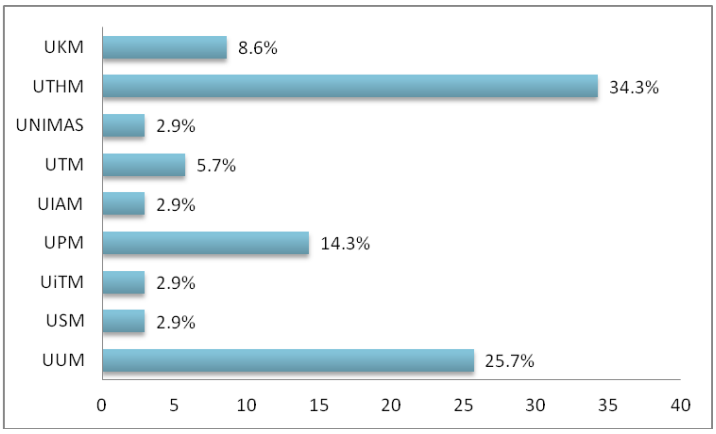

Fig. 3: Respondents from Malaysian Universities.

Table 2 indicates the correlation coefficient between Knowledge Management Practice (KMP) overall and Library Users' Satisfaction (LUS) is 0.846. In facilitating the interpretation, the coefficient of determination is found. This is simply the square of correlation coefficient implied by 100. This shows that there is a positive and significant relationship between the level of Knowledge Management Practice (KMP) overall and Library Users' Satisfaction (LUS). Thus, the significant level is 0.000 which is lower than the stated significance level 0.01. Therefore, this suggests that the relationship is statistically significant. The extent of correlation coefficient refers to Cohen and Holliday (1982).

Table 2: Overall correlations between KM Practice and Library User Satisfaction (LUS).

		LUS	KMP Overall
LUS	Pearson Correlation	1	.846**
	Sig. (2-tailed)		.000
	N	35	35
KMP Overall	Pearson Correlation	.846**	1
	Sig. (2-tailed)	.000	
	N	35	35
**. Correlation is significant at the 0.01 level (2-tailed).			

Figure 4 depicts radar chart of KM processes at Research University (RU). This result indicates that UTM (4.50), UPM (4.17) and USM (4.33) have a higher average. However, UKM (3.50) and UIAM (3.67) indicates moderate in Knowledge Creation (KCr). In Knowledge Acquisition (KAc), the result indicates that UIAM (4.60), UPM (4.44), UTM (4.40) and USM (5.00) have a higher average rather than UKM (3.30). In Knowledge Capture (KCa), the result indicates that USM (4.40), UPM (4.36), UTM (4.30), and UIAM (4.00) have a higher average rather than UKM (3.00). In Knowledge Sharing (KSh), the result indicates that UIAM (3.83) and USM (3.83) have a similar moderate average followed by UPM (3.80), UKM (3.34) and UTM (3.00). In knowledge Record (KRe), UPM (4.44) and USM (4.20) have a higher average rather than UKM (3.59), UIAM (3.50) and UTM (2.34). In Knowledge Preserving (KPr), the result indicates that UPM (4.44) and USM (4.20) have a higher average rather than UIAM (3.80), UKM (3.70) and UTM (3.70).

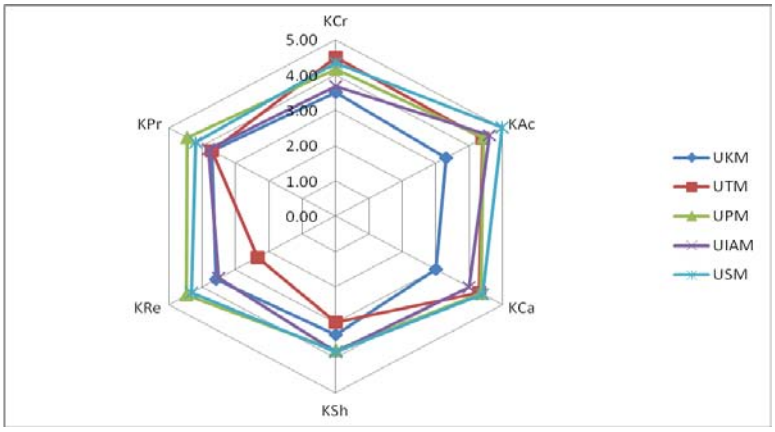

Fig 4: KM Processes among Research Universities.

Figure 5 depicts radar chart of KM processes at Non-Research University (NRU). This result indicates that UNIMAS (5.00), UUM (4.04) have a higher average. However, the result from UTHM (3.75) and UiTM (3.67) indicates moderate in Knowledge Creation (KCr). In Knowledge Acquisition (KAc), the result indicates that UNIMAS (5.00), UUM (4.04) and UTHM (4.03) have a higher average rather than UiTM (3.40). In Knowledge Capture (KCa), the result indicates that UNIMAS (5.00), UUM (4.11) and UTHM (4.03) have a higher average rather than UiTM (3.40). In Knowledge Sharing (KSh), the result indicates that UNIMAS (4.50) have a higher average. However, the result from UTHM (3.70), UTHM (3.70) and UUM (3.56) indicates moderate. In knowledge Record (KRe), the result indicates that UNIMAS (5.00) have a higher average. However, the result from UTHM (3.62) and UUM (3.26) were indicates moderate while UiTM (2.33) were indicate lowest. Furthermore, in Knowledge Preserving (KPr) the result indicates that UNIMAS (5.00), UUM (4.27) and UTHM (4.00) have a higher average rather than UiTM (3.60) were indicating moderate.

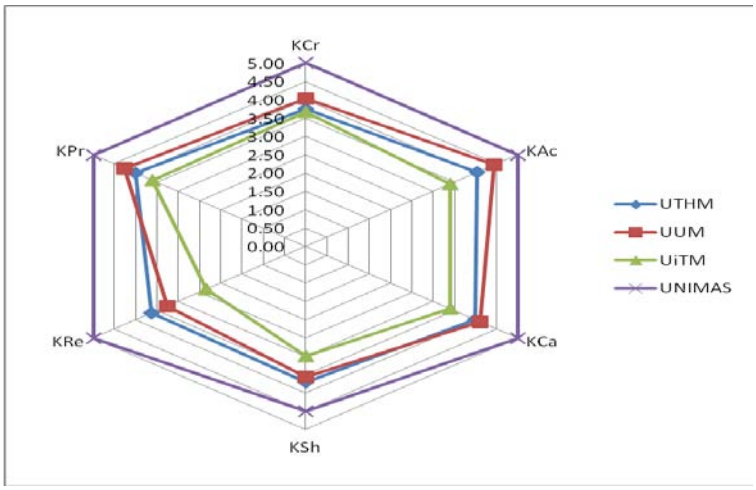

Fig. 5: KM Processes among Non-Research Universities.

Discussion:

This article focuses mostly on the KM processes such as Knowledge Creation (KCr), Knowledge Acquisition (KAc), Knowledge Capture (KCa), Knowledge Sharing (KSh), Knowledge Record (KRe) and Knowledge Preserving (KPr). Respondents in this study were specifically selected and PhD candidates are known as Lead User. The types of KM processes indicate that Knowledge Sharing (KSh) is the most significantly rated by lead users, with value of 23%. The result shows that the lead users aware with sharing process because they regularly apply and use among their social groups or colleagues. They also notice that university library share almost all updated information and knowledge within university community. Information Technologies (IT) such as the Internet, WiFi and tools also contribute to these significant phenomena. Recently, mobile phone, Tablet, iPAD and all gadget exists in the market make them feel easier to share knowledge without boundaries. They even could do sharing information and knowledge when study in the library. Moreover, Knowledge Record (KRe) and Knowledge Preserving (KPr) were asked whether good to be practiced in the university libraries. The result indicates that these two variables were rated 'agree' and 'significantly important' by lead users. It shows that Knowledge Record (KRe) and Knowledge Preserving (KPr) could contribute as new processes in KM practice at university libraries. Knowledge record and knowledge preserving exists in the library but did not offers to the lead user but more to products and services in the library. However, the libraries should inform and offers users these two processes because it deals with the products and services. When user knows these two processes, it appears that the library takes into account when users requests for this knowledge. Therefore, these two processes need to address and link into KM practice as depicted in Figure 1. This result discusses about Research University (RU) and Non-Research University (NRU) as depicted in Figure 4 and Figure 5. As research universities (Figure 4), an interesting result showed that such large public institutions as UKM, USM, UTM, UKM and UIAM have applied KM processes in the level of management especially at university libraries. The result indicates that these knowledge processes applied in order to become Research University. It shows that Research University libraries have a strong products and services that contribute to higher level of user satisfaction. For Non-Research University (Figure 5), the results show moderate of every each of KM processes. This indicates that university such as UTHM, UUM, UiTM and UNIMAS need to enhance or increase their products and services to achieve higher level of user satisfaction if they want to become a Research University (RU). Level of management especially library management needs to play role to help Non-Research University (NRU) align their dreams to become Research University (RU) in the future. The most interesting finding of this research was the statistical result of linkage between KM practice

and Library Users' Satisfaction. In Pearson correlation indicates that KM practice has a significant correlation with Library Users' Satisfaction as depicted in Table 2. It shows that KM processes applied in the library need to provide satisfaction to their users when they are using products and services. In fact, all product and services provide by the library must contribute to a high satisfaction to their users. If not, they will not enjoy visits to the library and utilize product and services. Therefore, libraries need to maintain their user satisfaction with further planning and activities which could raise level of user satisfaction every year.

Conclusion:

This study highlights the relationship between KM practice and Library Users' Satisfaction which is positive and significant. This article has concentrated on examining this linkage between KM practice and Library Users' Satisfaction at Malaysian university libraries. Moreover, it reveals what the most effective KM processes and Library Users' Satisfaction are for this purpose. Depending on the KM practice being considered, the type of KM processes varies. So, the role played by KM practices is really significant for university libraries seeking to gain a competitive advantage within them. The results of this study would recommend university libraries for investing efforts in the KM processes. Although, implementing the KM processes especially Knowledge Record (KRe) and Knowledge Preserving (KPr) would increase more internal library services, but it might play a substantial role for its survival. The university libraries require to improve their IT bases to be effective in determining product and service documents and developing their databases which ultimately facilitate the KM process of KM practice in the university libraries. With this increased attention comes an opportunity for academicians and researchers to participate in examining and refining new practices and processes as they emerge. Therefore, future research has to be conducted to find out the linkage between KM practice and Library Users' Satisfaction using Structural Equation Modeling (SEM) for stronger structural point of view.. In addition, this research can also be executed in other countries to explore the status of knowledge management practices in other parts of the world.

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REFERENCES

Aharony, N., 2011. Librarians' Attitudes toward Knowledge Management. *College and Research Libraries, 72*(2): 111-126.

Al-Hawamdeh, S., 2002. Knowledge management: re-thinking information management and facing the challenge of managing tacit knowledge. *Information research,* 8(1): 8-1. Retrieved from http://informationr.net/ir/8-1/paper143.html

Alavi, M., T.R. Kayworth and D.E. Leidner, 2006. An empirical examination of the influence of organizational culture on knowledge management practices. *Journal of management information systems,* 22(3): 191-224.

Alavi, M. and D.E. Leidner, 2001. Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS quarterly*, 107-136.

Anderson, R., 1996. *The eternity service.* Paper presented at the Proceedings of Pragocrypt '96, Prague, CTU Publishing House.

Ani, O.E., J.E. Esin and N. Edem, 2005. Adoption of information and communication technology (ICT) in academic libraries: a strategy for library networking in Nigeria. *Electronic Library, The,* 23(6): 701-708.

Anjanappa, M., M. Kattimani and S. Jange, 2009. Trends in ICT for Librarian 2.0: Open Courseware, Open AccessJournals and Digital Library Initiatives.

Borglund, E.A.M., 2008. *Design for Recordkeeping: Areas of Improvement.* Doctoral Thesis 52, Mid Sweden University, Sundsvall.

Borglund, E.A.M. and L.M. Öberg, 2008. How are records used in organizations? *Information research, 13*(2), 2. Retrieved from http://informationr.net/ir/13-2/paper341.html

Branin, J.J., 2003. Knowledge management in academic libraries. *Journal of library administration,* 39(4): 41-56.

Brendan, L., 1999. Knowledge management, librarians and information managers: fad or future? *New Library World,* 100(6), 245-253.

Cho, A., A. Doyle, D. Giustini, K. Lawson, T. Lee, J.A. Naslund, *et al*. 2009. "Dimensions of Responsive Multicultural Library Services at the University of British Columbia (UBC): Successes and Challenges". 1-22.

Choy, F.C., 2007. Libraries and librarians–what next? *Library Management*, 28(3): 112-124.

Coffman, E.J., 2010. Is Justified Belief Knowledge? Critical Notice of Jonathan Sutton, Without Justification. *Philosophical Books*, 51(1): 1-21.

Cohen, L. and M. Holliday, 1982. Statistics for social sciences. *Rural health in Jamaica: examining and refining the predictive factors of good health status of rural residents. Rural and Remote Health*, 9: 1116.

Daneshgar, F. and L. Bosanquet, 2010. Organizing Customer Knowledge in Academic Libraries. *Electronic Journal of Knowledge Management*, 8(1): 21-32.

Davenport, T.H. D.W. De Long and M.C. Beers, 1998. Successful knowledge management projects. *Sloan management review*, 39(2): 43-57.

Delsaerdt, P., 2008. From Légère Teinture to Central Place: A Revaluation of Book and Library History within Library and Information Science Programmes. *Library History*, 24(2): 143-151.

Dougherty, V., 1999. Knowledge is about people, not databases. *Industrial and Commercial Training*, 31(7): 262-266.

Ducas, A.M. and N. Michaud-Oystryk, 2003. Toward a New Enterprise: Capitalizing on the Faculty–Librarian Partnership. *College and Research Libraries*, 64(1): 55-74.

Egwunyenga, E.J., 2009. Record Keeping in Universities: Associated Problems and Management Options in South West Geo-Political Zone of Nigeria. *Int. J. Educ. Sci*, 1: 109-113.

Gandhi, S., 2004. Knowledge management and reference services. *The Journal of Academic Librarianship*, 30(5): 368-381.

García-Marco, F.J., 2011. Libraries in the digital ecology: reflections and trends. *Electronic Library, The*, 29(1): 105-120.

Gayton, J.T., 2008. Academic Libraries. *The Journal of Academic Librarianship*, 34(1): 60-66.

Gold, A.H., A. Malhotra and A.H. Segars, 2001. Knowledge management: An organizational capabilities perspective. *Journal of management information systems*, 18(1): 185-214.

Gorniak-Kocikowska, K., 2001. Revolution and the Library. *Library trends*, 49(3): 454-470.

Goswami, P., 2009. *Academic librarianship in India: Towards exploring strategic intent and core competencies in the present era*.

Gurteen, D., 1999. Creating a knowledge sharing culture. *Knowledge Management Magazine*, 2(5): 1-4.

Haahr, M., 2002. Information jockey: The dubious role of the 21st-century academic. *SOUTHERN REVIEW-ADELAIDE-*, 35(2): 71-87.

Hair, J.F., W.C. Black, B.J. Babin, R.E. Anderson and R.L. Tatham, 2006. *Multivariate Data Analysis*. New Jersey: Pearson University Press.

Hammer, M., D. Leonard and T. Davenport, 2004. Why don't we know more about knowledge? *MIT Sloan Management Review*, 45: 14-18.

Hansen, M.T., M.L. Mors and B. Løvås, 2005. Knowledge sharing in organizations: Multiple networks, multiple phases. *The Academy of Management Journal*, 776-793.

Harries, S., 2009. Managing records, making knowledge and good governance. *Records Management Journal*, 19(1): 16-25.

Heiman, B.A. and J.A. Nickerson, 2004. Empirical evidence regarding the tension between knowledge sharing and knowledge expropriation in collaborations. *Managerial and Decision Economics*, 25(6-7): 401-420.

Hildreth, P.M. and C. Kimble, 2002. The duality of knowledge. *Information research* Retrieved 1, 8, from http://informationr.net/ir/8-1/paper142.html

Igbeka, J. and C.O. Ola, 2010. The Need for Digitization of Special Library Materials in Nigerian University Libraries. from http://www.worlib.org/vol18no1/igbekaprint_v18n1.shtml

Ipe, M., 2003. Knowledge sharing in organizations: A conceptual framework. *Human Resource Development Review*, 2(4): 337-359.

Ismail, H.I., 2006. Access and Preserve. *Kekal Abadi*, 25(1/2): 1-5.

Jawadekar, W.S., 2011. *Knowledge management*: New Delhi : McGraw-Hill.

Karadsheh, L., E. Mansour, S. Alhawari, G. Azar and N. El-Bathy, 2009. A theoretical framework for knowledge management process: towards improving knowledge performance. *Communications*, 7.

Lee, H.W., 2005. Knowledge Management and the Role of Libraries. *Knowledge Management and the Role of Libraries.* Retrieved August 18, 2012, from http://www.white-clouds.com/iclc/cliej/cl19lee.htm

MacWhinnie, L.A., 2003. The information commons: the academic library of the future. *Portal-Libraries and the Academy*, 3(2): 241-258.

Maija-Leena, H. and I. Mirja, 2005. Knowledge processes: A strategic foundation for the partnership between the university and its library. [DOI: 10.1108/01435120410609743]. *Library Management*, 26(6): 324-335.

Maponya, P.M., 2004. Knowledge management practices in academic libraries: a case study of the University of Natal, Pietermaritzburg Libraries. *SCECSAL Proceedings*.

Martin, B., A. Hazeri and M. Sarrafzadeh, 2006. Knowledge management and the LIS professions: investigating the implications for practice and for educational provision. *Australian Library Journal*, 55(1): 12.

Martin, J., 2009. The art of librarianship. *College and Research Libraries News*, 70(11): 652-654.

Mavodza, J., 2010. *Knowledge management practices and the role of an academic library in a changing information environment: the case of the Metropolitan college of the New York.*

McInerney, C., 2002. Knowledge management and the dynamic nature of knowledge. *Journal of the American Society for Information Science and Technology*, 53(12): 1009-1018.

Meng, L. and G. Fei, 2003. Why Nonaka highlights tacit knowledge: a critical review. *Journal of Knowledge Management*, 7(4): 6-14.

Nonaka, I., P. Byosiere, C.C. Borucki and N. Konno, 1994. Organizational knowledge creation theory: a first comprehensive test. *International Business Review*, 3(4), 337-351.

Nonaka, I. and H. Takeuchi, 1991. The knowledge-creating company. *Harvard business review*, 85(7/8), 162.

Nonaka, I. and H. Takeuchi, 1995. *The knowledge-creating company: How Japanese companies create the dynamics of innovation*: Oxford University Press, USA.

Parirokh, M., F. Daneshgar and R. Fattahi, 2008. Identifying knowledge-sharing requirements in academic libraries. *Library review*, 57(2): 107-122.

Parirokh, M. and R. Fattahi, 2009. A theoretical framework for development of a customer knowledge management system for academic libraries. *Spanish Journal of Agricultural Research*, 1-16.

Pengshan, Y. and T. Yongqin, 2011. (15-17 July 2011). *The model of tacit knowledge sharing and the importance of library in the course.* Paper presented at the Software Engineering and Service Science (ICSESS), 2011 IEEE 2nd International Conference on.

Richardson, J.V., 1995. *Knowledge-based systems for general reference work: Applications, problems, and progress*: Academic Press, Inc.

Riege, A., 2005. Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management*, 9(3): 18-35.

Sarrafzadeh, M., B. Martin and A. Hazeri, 2010. Knowledge management and its potential applicability for libraries. *Library Management*, 31(3): 198-212.

Sekaran, U., 2003. Research methodology for business: New York: John Wiley and Sons, Inc.

Siddike, A.K., N. Munshi and A. Sayeed, 2011. The Adoption of Information and Communication Technology (ICT) in the University Libraries of Bangladesh: An Exploratory Study.

Skyrme, D. and D. Amidon, 1997. The knowledge agenda. *Journal of Knowledge Management*, 1(1): 27-37.

Smiraglia, R.P., 2002. Further reflections on the nature of 'A Work': An introduction. *Cataloging and classification quarterly*, 33(3-4): 1-11.

Tandale, P.G., P.G. Sawant and G.P. Tandale, 2011. Knowledge Management and the Role of Libraries. *Proceedings of the 5th National Conference; INDIACom-2011*.

Tasmin, R. and P. Woods, 2008. Knowledge management and innovation in Peninsular Malaysia.

Teh, P.L. and C.C. Yong, 2011. Knowledge sharing in is personnel: organizational behavior's perspective. *Journal of Computer Information Systems*, 51(4): 11.

Townley, C.T., 2001. Knowledge management and academic libraries. *College and Research Libraries*, 62(1): 44-55.

Tripathy, J.K., N.K. Patra and M.R. Pani, 2007. Leveraging knowledge management: challenges for the information professional. *DESIDOC Journal of Library and Information Technology*, 27(6): 65-73.

Wabwezi, A., 2011. *The role of knowledge sharing in fostering innovation in higher education: a case study of Tallinn University.* Høgskolen i Oslo. Avdeling for journalistikk, bibliotek-og informasjonsvitenskap.

Wagner, W., J. Otto and Q. Chung, 2002. Knowledge acquisition for expert systems in accounting and financial problem domains. *Knowledge-Based Systems*, 15(8): 439-447.

White, T., 2004. *Knowledge management in an academic library case study: KM within Oxford University Library Services (OULS).*

Williams, A., N. Giuse, T. Koonce, Q. Kou and D. Giuse, 2004. Using knowledge management practices to develop a state-of-the-art digital library. *MedInfo*, 11(1): 99-103.

Yeo, G., 2005. Understanding users and use: a market segmentation approach. *Journal of the Society of Archivists*, 26(1): 25-53.

Zack, M.H., 1999. Managing codified knowledge. *Sloan management review*, 40(4): 45-58.