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cyprian ifeanyi ugwu

cyprian.ugwu@unn.edu.ng

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IMPLICATIONS OF THE PERCEIVED FACTORS FOR KNOWLEDGE MANAGEMENT IMPLEMENTATION IN FEDERAL UNIVERSITY LIBRARIES IN NIGERIA

By

Cyprian I. Ugwu (Ph.D)

Department of Information Science, University of South Africa, South Africa

ugwuuci@unisa.ac.za ; Cyprian.ugwu@unn.edu.ng

Nnamdi Azikiwe Library, University of Nigeria, Nsukka, Nigeria.

ABSTRACT

Knowledge management has become one of the survival strategies for university libraries that are facing serious financial pressures and the challenges of globalization. This study aimed at proposing the overall approach to KM implementation in federal university libraries in Nigeria by identifying the required organizational factors. The relationship between these factors was also determined to help define appropriately the organizational commitments for KM implementation strategies. The study was based on a quantitative approach within which the descriptive survey research method was chosen. Questionnaire was the main instrument for data collection, and 360 Librarians in federal university libraries in Nigeria responded to the questionnaire. The copies of the questionnaire were administered to the respondents using Research Assistants. Data collected were analyzed quantitatively using descriptive and inferential statistics. The analysis was performed using SPSS. The results of the study showed that the success of KM implementation depends on certain organizational dimensions. This study revealed that, in federal university libraries in Nigeria, these organizational dimensions consisted of top management leadership support, human resources policy, compensation schemes and collaboration. Positive correlation was also found between the factors defined by these organizational dimensions. Based on these findings, the overall organizational approach to KM implementation was proposed for the federal university libraries in Nigeria.

Keywords: Collaboration, human resources, rewards system, management support and knowledge management.

1.0 Introduction

University libraries the world over are facing many challenges. The factors responsible for this ugly trend are obvious. The most significant of these factors are poor funding of university libraries and globalization. These two factors are interwoven. The phenomenon of globalization is a result of the advances in information technology where, due to poor funding, university libraries can no longer cope with the rate of information explosion. This situation is also affecting library users. They are having the experience of information overload coupled with their increasing demands for library and information services.

Knowledge management has been discussed in the literature as one of the survival strategies for university libraries especially in developing countries. Shanhong (2000) stated that the objective of knowledge management in libraries was to promote knowledge innovation, closer relationship between libraries and between a library and its users and to quicken knowledge flow. There is a widespread recognition within the library and information science literature that KM is relevant to the library and information profession. For instance, Ajiferuke (2003) discussed the popularity of KM in

Canada from the perspectives of the roles of information professionals and emphasized the need for empirical evidence. Bouthillier and Shearer (2002) also emphasized the need for empirical evidence on how to apply KM to the library environment. Jain (2007), in his study, tried to survey Knowledge management in university libraries in Africa. These studies show that there is a gap in the literature on how to implement KM in organizations such as libraries.

Many firms or companies thought that the implementation of knowledge management was entirely a technology issue. Being led by this thought, these firms invested so much on expensive technologies, but the return on investment made many company executives to become disillusioned with KM. They began to question whether knowledge management was another management fad that looked great on paper. However, on closer inspection, it was discovered that knowledge management was not the problem, rather, it was the way these companies or firms had gone about implementing it (Brun, 2005)

The failure of technological solution led many researchers to begin to explore other possible ways of facilitating KM implementation in organizations. It was found that a relationship exist between organizational environment and knowledge management. Holowecki (2002) says that there are factors in the organizational environment that can influence the application of knowledge management. These factors are called organizational factors (Kim, 2004). They are factors that must exist in an organization for a successful KM implementation.

There have been attempts by knowledge management researchers to identify the organizational factors for knowledge management. The present study relied on the studies by Holsapple and Joshi (2006) to identify five organizational factors that are critical to the success of knowledge management. These factors are: 1) top management leadership support, 2) human resources policy 3) compensation schemes 4) collaboration and 5) technology. However, technology was dropped because of the call by some KM researchers such as Wiig (1999), Zack (1999), Blackler (2001) and Brun (2005) for other practical ways of managing organizational knowledge other than technology.

The organizational factors that form the focus of this research are therefore top management leadership, human resources policy, compensation schemes, and collaboration. This study is, therefore, an attempt to examine these organizational dimensions within the university library environment for the purpose of proposing an overall approach to KM implementation in university libraries.

2.0 Statement of problem

University libraries exist to support the academic programmes of their parent institutions. They provide resources, including expanded access to them, to enhance or promote teaching, learning and research in their universities. However, this noble objective is being hindered by the inability of university libraries to meet the needs of their users.

Unfortunately, students including their lecturers have begun to look elsewhere including patronizing internet centers for their information needs. The inadequate and lack of current library information resources in today's university libraries may have contributed to this ugly trend. Besides, globalization and the funding situation in these libraries are also critical factors.

In Nigeria, the situation is the same. Efforts are being made to make our university libraries to be globally visible and to begin to develop innovative services. KM is a viable option, but it lacks practical ways of application. Worst still, there is a gap in the literature on how to apply KM to the university library environment. This study,

therefore, intends to identify the organizational factors required for an overall approach to KM implementation in federal university libraries in Nigeria.

3.0 Objectives of the study

The main objective of the study is to determine the organizational factors for the implementation of knowledge management in federal university libraries in Nigeria.

Specifically, the study seeks to:

1. Determine how librarians perceive the factors necessary for KM implementation in university libraries in Nigeria
2. Determine the relationship between the perceived factors for KM implementation
3. Propose the overall approach to KM implementation as the implications of the perceived factors.

4.0. Literature Review

4.1. Concept of Knowledge management

Knowledge management is a new discipline, and it is drawing its theoretical foundation from different disciplines. According to Husain and Nazim (2013), Knowledge management is 'a completely new discipline or simply a re-branding of librarianship or information management. This has resulted in the emergence of different schools of thought (Earl, 2001) based on different perceptions of researchers about knowledge management (Sveiby, 1996; Earl, 2001; Husain and Nazim, 2013). It must be stated here that, in a more recent study, Husain and Nazim (2013) identified three schools of thought, from the researchers' viewpoints, as opposed to two already identified by Earl (2001). It is also important to emphasize that both authors agreed on the first two schools of thought. The first group of researchers perceived knowledge management as a discipline not different from librarianship and information management. To support this, Husain and Nazim (2013) reviewed works by Kakabadse, Kouzmin and Kakabadse (2001), Martin (2008), and Teng and Hawamdeh (2002). From these works, according to Husain and Nazim, there seems to be a considerable overlapping of the tools, terminology and techniques used in librarianship, IM and KM. The tools include databases, internet, collaborative tools, etc, whereas the concepts used include information audit versus knowledge audit and information mapping versus knowledge mapping. Earl (2001) asserted that researchers in this group, especially Alavi and Leidner (2001), viewed knowledge as objects that could be identified and handled or processed using information technology.

The second group of researchers perceived knowledge management as different from librarianship and IM. Husain and Nazim (2013) reported different works that supported this school such as Owen (1999), Broadbent (1998), Sinotte (2004) and Wilson (2002). According to Owen (1999), the focus of IM is on information as an object and on explicit and factual information, while the focus of KM is on knowledge as an object and on tacit knowledge embedded in the employees and in the organization. Broadbent (1998) describes KM in libraries as not concerned with organizing books or journals, searching the internet for researchers, but may be considered as part of KM processes. Earl (2001) reported that researchers in this group, like Sveiby (1996), believed that knowledge management was about management of people, or rather was concerned with knowledge flows or knowledge processes in organizations.

According to Husain and Nazim (2013), the third group of researchers perceived KM as relevant to the interests of the LIS profession. The authors in this group such as Abell and Oxbrow (2001), White (2004), Butler (2000), Southon and Todd (2001) are calling for full involvement of information professionals in KM. In response to this call as well

as the growing interest of the LIS profession in KM, the International Federation of Library Association (IFLA) created a KM section (IFLA, 2009) for the purpose of deepening understanding of the many dimensions of KM in libraries and among LIS professionals. Knowledge management, according to IFLA as cited by Husain and Nazim (2013), is defined as the process of creating, storing, sharing, applying and reusing organizational knowledge to enable an organization to achieve its goals and objectives.

4.2. Organizational Factors for Knowledge Management implementation

Organizational factors are defined as factors within the organizational environment that can facilitate KM success or implementation. It has been found that successful implementation of knowledge management in an organization depends on the existence of a delicate blend of factors (Holsapple and Joshi, 2000). There have been attempts by researchers and practitioners to identify these organizational factors (Holsapple and Joshi, 2000; Bobby, 2006; Jalaladeen, Karim & Mohammed, 2008). Literature reveals that there is a diverse list of organizational factors for successful KM implementation, and this list is by no means exhaustive. However, Bobby (2006) suggested that organizations need a much smaller core set of these factors to succeed in their application of knowledge management.

To identify the small core set of the organizational factors, this research relied on Holsapple and Joshi's (2000) study. Holsapple and Joshi carried out a literature review that yielded eight factors that potentially influenced knowledge management in organizations. The eight factors include culture, leadership, technology, organizational adjustments, evaluation of knowledge management resources/activities, employee motivation, and external factors. The authors expanded these eight factors to have eighteen factors, and they grouped them into three categories of influences on knowledge management. They are managerial influences (leadership, coordination, control and measurement), resource influences (human, knowledge, financial and material), and environmental influences (fashion, markets, competitors, time, technology, governmental or economic or political or social or educational climate). The authors described these influences as the three major kinds of forces that influence knowledge management in organizations.

In order to keep the number of organizational factors to the barest minimum as suggested by Bobby (2006), at least one factor was selected from each of the influences on KM as identified by Holsapple and Joshi (2000). The factors were as follows; leadership (also described as top management leadership), coordination (which involves compensation schemes), measurement (which involves collaboration), human resources and technology. Therefore, the organizational factors selected from the above three forces that influence knowledge management include: top management leadership, human resources, compensation schemes, collaboration, and technology.

There are four reasons why the above factors were selected. Firstly, these factors covered the three major influences on KM by Holsapple and Joshi (2000). Secondly technology was selected from the environmental influences because it appeared in the literature as the first approach to knowledge management solutions. Thirdly, the other factors selected were mixtures of managerial and resource influences, and they corresponded with the critical success factors for knowledge management identified by Bobby (2006). Bobby summarized these factors as top management leadership support, compensation schemes, collaboration and quality of knowledge. Bobby identified these factors from Holsapple and Joshi's (2000) study which found leadership, coordination, and measurement as critical success factors for KM applications. From the Bobby's factors above, the quality of knowledge was dropped because the present research was

not intended to develop knowledge management systems, or to determine factors related to the knowledge management systems success. Fourthly, they are factors within the organizational environment.

However, technological solution to knowledge management has been criticized in the literature (Brun, 2005). A study conducted in 1999 by Teletech Resource Corporation looked at 93 KM applications at 83 different companies. The study indicated that only 32% of the KM applications were technology – driven (Holowetzki, 2002). Though IT-based approaches to knowledge management dominated the early literature on the subject (Blackler 2000), literature now reveals that the efforts of many companies to manage knowledge using specific technology applications have not achieved their objectives, and many company executives have become disillusioned with the practical ways to manage organizational knowledge (De Long,2000). Lee (2005) also argued that an organization could start to manage its knowledge with any available computer systems. This implies that an organization should not wait to procure enough technological infrastructures, before starting to implement knowledge management. Other authors have also argued that knowledge management technologies are very expensive and so attention should be more on other factors (Blackler, 2000). In summary, Zack (1999) argues that technology accounts for a less significant proportion of KM success in organizations. In view of the above, the technology factor was dropped, thus reducing the core factors identified to four. These factors are: 1) top management leadership, 2) human resources, 3) compensation schemes, and 4) collaboration.

4.21. Top Management Leadership support

Top management leadership support refers to the extent to which knowledge management efforts are promoted or supported by the top management of the organization, where top management refers to the individual or individuals responsible for allocating resources for knowledge management and for specifying the knowledge management programmes for the organization (Rai and Bajwa, 1997). This follows that top management commitment is required (Kim, 2004) or a KM champion should be appointed to take charge of knowledge management activities in an organization (Ambrosio, 2000, Huber, 2001) and provide strong and dedicated leadership (Kirrane, 1999), or provide KM vision, reward KM activity done by staff, create internal trust among staff and encouraging learning among staff through mentoring (O’Dell and Grayson, 2000; Bonner, 2002; Maponya, 2004).

Knowledge management activities can also be coordinated by the university librarian as follows: taking active role in KM process, staying in contact with KM personnel, providing adequate resources to carry out KM activities and emphasizing the importance of knowledge management (Rai and Bajwa, 1997). The top management leadership variables that have received attention in the literature are clear vision, goals and trust (Leonard, 1995; Davenport and De Long, 1998; O’Dell and Grayson, 1998; Von Krogh, 1998; De Long and Fashey, 2000; Martin, 2000; Williams, 2002). While vision brings about clear organizational goals, trust is also needed to engender a sense of involvement and contribution among employees (Leonard, 1995; O’Dell and Grayson, 1998, Von Krogh, 1998). Trust also helps to determine knowledge management activities in an organization (Williams, 2002; Martin, 2000), reassures employees of their value and influences knowledge sharing among them (Davenport and De Long, 1998; Martin, 2000; Williams, 2002); De Long and Fashey (2000). This issue of trust would not pose a problem in the university library environment. According to Lee (2000), libraries have also facilitated information exchange so that they are placed in a perfect position to take on knowledge management functions.

4.22. Human Resources Policy

Human resources policy defines the activities that are intended to prepare staff or equip them with the requisite skills for active participation in knowledge management. Lim and Wobas (2000) have argued that having a strong human resources policy in an organization affects the ways in which the organization manages its knowledge. Holowetzki (2002) supports this view by maintaining that the human resources and culture are the driving factors that determine the success or failure of knowledge management initiatives. Edem and Ani (2010) also support the view that human resources management is the core of knowledge management in libraries and conclude that libraries and librarians must attach importance to vocational training and life long education for enhanced productivity and effective performance.

Researchers such as King (2000) and Martin (2000) regard people or human resources as an important element of knowledge management. Other variables of human resources discussed in the literature include employee competence, staff posting, education or training and staff turn-over. Williams (2002) and Bixler, (2002) maintain that staff must be repositioned to play knowledge management roles by ensuring that employees understand the philosophy, goals and benefits of knowledge management and ensuring that members of staff have the required skills for knowledge management. Syed-Ikhsan & Rowland, (2004), Bogdanowicz and Bailey (2002) and Smith (2001), in highlighting the importance of posting, training and turn-over, state that employees bring to an organization prior education, experience, knowledge and skills to add value to the organization, to create as well transfer knowledge and to translate their knowledge into the organization's routine, competencies, job description and business processes, plans, strategies and cultures. Smith (2001) asserted that employees with a lack of adequate training, or explicit knowledge, struggle to keep up. In the university library environment, librarians already possess knowledge or the expertise that can help them to contribute to knowledge creation and transfer (Jain, 2007; Townley, 2001). These authors have also agreed that librarians' knowledge of classification schemes, cataloguing and controlled vocabulary will help them in metadata creation; knowledge of resources selection and collection development will help them in content creation and management; and knowledge of citation analysis and extraction and use of management information from library automation systems will help them in adopting knowledge management techniques such as business intelligence. Librarians have been very active in conducting studies and research in the areas of information needs and information seeking behavior. This lays a solid foundation for librarians to begin to make contributions to KM initiatives in their different libraries.

Staff turnover has been found to be a problem to some organizations (Zolingen, Streumer & Stooker, 2001). When a member of staff leaves an organization, he/she goes with accumulated experience and knowledge. This poses a challenge to any knowledge initiatives because organizational knowledge assets may be lost as people retire or leave for other positions. It is also an appropriate procedure to retain knowledge and know-how of staff that leave the organization either as a result of retirement or for a higher position elsewhere

4.23. Compensation Schemes

Compensation schemes consist of activities that motivate staff to embrace KM. According to Nidumolu and Knotts (1998), compensation schemes refer to mechanisms developed in the organization to recognize and appreciate the KM behaviour of staff. Leonard (1998) argues that compensation schemes or reward systems can determine how

knowledge is accessed and how it flows in organizations, while O'Dell and Grayson (1998) maintain that the compensation schemes motivate staff in an organization.

There are two types of compensation schemes identified in the literature, namely: intrinsic and extrinsic compensation schemes or motivation (Curry, Nagner and Grothaus, 1991; Ryan and Deci, 2000; Williams, 2002), and they are defined as the origins of the desire to engage in a particular behavior either to achieve internal reward (i.e., intrinsic compensation scheme) or to receive an external reward (i.e., extrinsic compensation scheme). Put in a more simplified manner, intrinsic compensation scheme refers to doing something because it is inherently interesting or enjoyable, and extrinsic compensation scheme refers to doing something because it leads to a separate outcome (Ryan and Deci, 2000).

Some scholars maintained that compensation schemes should be created in an organization to address both extrinsic and intrinsic motivators (Davenport and De Long, 1998; Hasanali, 2002; Williams, 2002). These authors also maintained that these motivators are required to change the employee behaviour. They concluded that with the right extrinsic rewards such as acquiring new skills or undertaking new projects and intrinsic rewards such as recognition or expression of appreciation, the workers will be highly innovative and creative.

Compensation schemes have been found to have impact on application of knowledge management. However, mixed findings on the impact of compensation schemes have persisted (Bobby, 2006). Some researchers agreed that successful knowledge management in an organization requires some form of compensation schemes (both extrinsic and intrinsic) to motivate participation in KM efforts (Cook, 1999; Ambrosio, 2000; Alavi and Leidner, 2001). Others agreed that even though carefully designed compensation schemes promote knowledge management in organizations, the intrinsic compensation schemes may be more effective than the extrinsic compensation schemes (Garud and Kumaraswamy, 2005).

4.24. Collaboration

Collaboration is defined as the extent to which individuals actively communicate, cooperate, and help one another in their work by sharing knowledge and expertise (Hurley and Hult, 1998; Rus and Lindrall, 2002; Lee and Choi, 2003).

Collaboration as an organizational factor for application of knowledge management demands that individuals must contribute their personal knowledge. According to Nonaka (1991), new knowledge always begins with the individual or his personal knowledge. This personal knowledge should be transformed into organizational knowledge valuable to the organization as a whole (Bobby, 2006). Making personal knowledge available to others is the central activity of the knowledge creating organizations such as universities and university libraries

In some of these knowledge creating organizations, people are afraid to share their knowledge and experiences as they feel their positions might be taken away from them (Huber, 2001). To overcome this resistance, measures to ensure collaboration must be taken. In essence, management must encourage organization members to be supportive of others' KM activities, to interact with organization members both in and outside of a member's organizational unit, and to just be helpful in general (Lee and Choi, 2003).

Other authors (Senge, 1990; Cross and Baird, 2000; Blackler, 2000; Martin, 2000) suggested that organizations should strive to put in place a structure that encourages learning. Senge (1990) calls this organizational learning that can be achieved through social networks such as teams, work groups, communities of practice or people coming

together to discuss problems arising from their work in an organization. Aside from organizational learning, having an efficient communication flow was discussed in the literature as a tool for collaboration (Nonaka and Takeuchi; 1995; Kluge, Stein and Licht, 2001; Syed-Ikhsan and Rowland, 2004). Kluge, Stein and Licht (2001) were of the opinion that effective top-down and bottom-up communication would not only facilitate collaboration but also make existing knowledge profitable to the organization.

5.0. Empirical Studies

The empirical studies on organizational factors for KM applications were generally scanty in the literature or scarcely reported especially in the library literature with particular reference to Nigeria. The few studies presented here were those that covered the factors selected for study in this paper. A study aimed at exploring the perceptions of critical factors for successful knowledge management among knowledge workers in Taiwan and United States was carried out by Schulte and Wang (2004). A total of 623 respondents were studied, consisting of 327 from Taiwan and 296 from United States. Questionnaire was the instrument used for data collection. Based on the data collected, the knowledge workers from both countries perceived leadership involvement or support as a critical factor for successful knowledge management in organizations. Bobby (2006) utilized a web-based survey instrument to gather data on 80 employees in a public organization on their perceptions of factors in the knowledge management system success. The data collected revealed that top management support, policies for human resources, reward systems and collaboration were the core factors that could potentially influence KM success in an organization.

In the university library environment, factors such as leadership support and training or education of librarians were identified (Ezeani, Ugwu and Ozioko, 2008; Maponya, 2004; Ajiferuke, 2003). The empirical work by Syed-Ikhsan and Rowland (2004) investigated knowledge management in a public organization. This study was necessitated by lack of empirical studies on KM in developing countries. The authors specifically examined the relationship between organizational elements and the performance of knowledge creation and transfer. One of the organizational elements identified in this study was 'human resources' which correlated significantly with knowledge creation. Mason and Paulen (2003) investigated the perception of knowledge management in New Zealand. The study revealed that education was one of the factors that could promote knowledge management in organizations. Kim (2004) explored the organizational factors affecting knowledge sharing capabilities in e-government. The author identified many organizational variables for this study, one of which was the reward systems. Other variables investigated include vision and goals, trust, social networks, centralization, formalization and technology application.

In another study, Rosmaini and Woods (2007) examined knowledge management practices and their relationship with innovation among large manufacturers in West Malaysia. According to them, knowledge management (KM) was frequently cited as one enabler of firm innovation especially among Western corporations. It was found that effective communication was a significant factor.

The studies, as reported here, have affirmed that certain organizational elements are required for KM success. However, Syed-Ikhsan and Rowland (2004) pointed out that KM implementation lacked empirical studies in developing countries. Therefore, the present study is an attempt to fill this gap in the literature.

6.0. Research methodology

The study adopted a quantitative approach within which the descriptive survey method was employed to determine the organizational factors for knowledge management in university libraries in Nigeria. A total of 450 professional librarians were found to be in the employ of these libraries, and they all participated in this study. Questionnaire was the major instrument for data collection. The questionnaire was developed by the researcher, and it was based on the ideas gathered from the literature. Each of the organizational dimensions in the study such as “top management leadership”, “human resources policy”, “compensation scheme” and “collaboration” was reflected in the questionnaire and narrowed down to at most two factors. For instance, top management leadership support was narrowed down to “clear vision/goals” and “trust”; human resources policy to “training” and “job placement” and so on. Multiple item measures were provided for each factor. To gather responses on each of the item measures, a four point Likert-type of scale was used. The scale used consisted of response categories such as “Strongly agree”, “Agree”, “Disagree” and “Strongly disagree”.]

A draft of the questionnaire was sent to experts for content validity and suggestions for improvement. Two Lecturers in Educational Measurement and Evaluation validated the instrument, while two Lecturers in Library and Information Science helped in improving the draft. Cronbach’s alpha is one of the numerical coefficients to measure the reliability of summated scales. It estimates the internal consistency of scales (Gliem and Gliem, 2003). The scale used in this study was found to be highly reliable as its alpha value was 0.91.

A total of 450 copies of the questionnaire were administered to the respondents by mail out of which 365 copies were returned, but 360 were found to be correctly filled and used for the study. This gave a response rate of approximately 80%. The Statistical Package for Social Sciences was used for descriptive and inferential analyses of data.

7.0. Results and Discussions

7.1. Organizational factors for KM implementation

Descriptive statistics such as Mean and Standard Deviation scores were used to analyze data on these factors as presented in Table 1 through Table 4.

Table 1: Mean and Standard Deviation Scores on the perceived Top Management Leadership Factors for KM Implementation in Nigerian university libraries

Statement	N	\bar{X}	SD
Formulating the vision of the library	360	3.25	0.77
Documenting knowledge management policy	360	2.96	0.74
Integrating knowledge management policy with the vision of the library	360	3.15	0.67
Distributing knowledge management policy to staff	360	2.93	0.78
Stressing the importance of knowledge management	360	3.10	0.67
Building internal trust among staff	360	2.93	0.72
Updating library procedures and policies regularly	360	3.13	0.69
Undertaking Knowledge mapping exercise	360	2.56	0.98
Maintaining open door policy	360	2.95	0.82
Welcoming contributions from staff	360	3.19	0.79
Allowing staff to take independent decisions	360	2.47	0.87
Encouraging upward feedback	360	2.71	0.88
Overall mean	360	2.94	0.41

Table 1 above shows the top management leadership activities for knowledge management application in university libraries. The respondents agreed that the top management was playing leadership roles in knowledge management. The greatest role played was providing statement of vision of the library (3.25) followed by welcoming contributions from staff (3.19), emphasizing the importance of knowledge management (3.10) and aligning or integrating knowledge management with the vision of the library (3.15). The respondents also agreed that the top management of the library opposed independent decisions (2.47), but an open door policy was maintained for staff (2.95). The overall mean of 2.94 showed that the respondents were in agreement that top management leadership support was needed for knowledge management implementation in federal university libraries in Nigeria.

Table 2: Mean and Standard Deviation Scores on Human Resources factors for KM Implementation

Statement	N	\bar{X}	SD
Sponsoring staff to conferences/workshops on knowledge management	360	3.31	0.68
Encouraging staff to enroll for formal training on knowledge management	360	3.10	0.66
Encouraging self improvement	360	2.97	0.85
Approving short courses on knowledge management for staff	360	3.11	0.81
Rotating staff on the job	360	3.16	0.77
Deployment of staff based on their abilities and skills	360	2.85	0.75
Promoting the right people	360	2.67	0.79
Placing staff on the right position	360	3.07	0.73
Recruiting staff based on need	360	2.88	0.67
Retention of staff with valuable tacit knowledge	360	3.01	0.81
Overall mean		3.01	0.44

Table 2 above show the human resources practices for knowledge management application in university libraries. The respondents agreed that there are practices in the university library that encourage them to participate in knowledge management. The greatest of these practices is rotation of staff on the job (3.16). Other important practices are formal training of staff (3.10), staff retention (3.01), sponsoring staff to conferences/workshops (3.31), allowing staff to attend short course related to KM (3.11) , promoting the right people (3.07) and self-improvement (2.97). The overall mean of 3.01 showed that the respondents agreed that having human resources policy would help in KM implementation.

Table 3: Mean and Standard Deviation Scores on Compensation Schemes for KM Implementation

Statement	N	\bar{X}	SD	Decision
Opportunity to grow on the job is available	360	3.30	0.66	
I am interested in my job	360	3.44	0.36	
I enjoy more job recognition	360	3.29	0.63	
Records of great achievements in my job	360	3.20	0.56	
I am satisfied on the job	360	3.08	0.59	
I enjoy positive feedback on the job	360	3.10	0.63	
My contribution is always appreciated	360	2.79	0.76	
I enjoy other incentives and fringe benefits	360	2.56	0.70	
Appraisal system is performance-based.	360	2.67	0.74	
My monthly salary is enough for me	360	2.50	0.79	
Overall mean		2.73	0.39	

Table 3 above shows the compensation schemes for knowledge management application in university libraries. The respondents agreed that they are rewarded both intrinsically and extrinsically in their libraries. On the intrinsic rewards the respondents agreed that their job was interesting (3.44), gave them more recognition (3.29), offered them the opportunity to grow (3.30) and helped them to record great achievements (3.20). On the extrinsic rewards, the respondents agreed that their contributions were always appreciated (2.79), they were appraised based on their performance (2.67), and they enjoyed other incentives and fringe benefits (2.56). The above results, therefore, revealed that compensation schemes were necessary for the success of knowledge management implementation in university libraries in Nigeria.

Table 4: Mean and Standard Deviation Scores on Collaboration factors for Knowledge Management Implementation

Statement	N	\bar{X}	SD
Encouraging staff to work in groups	360	2.79	0.87
Mentoring programmes for staff	360	2.62	0.77
Encouraging staff to help one another	360	2.59	0.75
Encouraging staff to support one another's KM activities	360	2.56	0.71
Structure for top-down communication only	360	2.43	0.79
Structure for bottom up communication only	360	2.39	0.75
Structure for both top-down and bottom-up communication	360	2.98	0.94
No communication flow among staff	360	2.35	0.96
Evidence of participation in library cooperation	360	2.76	0.70
Over all mean		2.61	0.52

Table 4 above shows the collaboration factors for knowledge management implementation in university libraries in Nigeria. The data in the above table show that there are structures that help librarians to collaborate in their libraries. These structures include working in groups (2.79), mentoring programmes (2.62), room for assisting one another (2.59) and defined communication flow among staff (2.98). The overall mean of 2.61 showed that the respondents agreed that collaboration among staff was necessary for the success of KM implementation in federal university libraries in Nigeria.

The findings of the study as depicted in tables 1 – 4 reveal that there are factors within the university library environment in Nigeria that promote knowledge management applications. These factors were found to consist mainly of top management leadership support, human resources policy, compensation schemes and collaboration.

These results show that implementing knowledge management in federal university libraries in Nigeria requires an organizational approach. This is contrary to the former belief of information professionals, including those in Nigeria that knowledge management is all about information and communication technology. It was believed that the success of knowledge management in organizations including libraries depended more on the technological factors than other factors, including organizational and environmental or external factors. These findings support those of Bobby (2006) and Holsapple and Joshi (2000). Bobby (2006) was of the opinion that organizations needed core sets of factors to succeed in their knowledge management strategies or initiatives.

Bobby identified these core set of organizational factors as consisting of top management leadership, compensation schemes, quality of knowledge and collaboration. Holsapple and Joshi (2000) identified eight factors that were tied to the success of knowledge management in organizations. These factors are culture, leadership, technology, organizational adjustment and external factors. The findings of the study also support the suggestions in the literature that organizations cannot achieve the desired result or success in knowledge management when it is based only on technology.

7.2. Relationship between organizational factors for KM implementation

Table 5 shows the relationship between the organizational factors for KM implementation in university libraries in Nigeria. The results showed that within an organizational dimension, the correlation coefficient is positive between the factors. For instance, in the top management dimension, the correlation between vision/goals and trust is positive and significant ($r = 0.57, p < 0.05$). The correlation between posting and training in the human resources dimension is positive and significant ($r = 0.44, p < 0.05$), in the compensation schemes dimension, it is positive and significant ($r = 0.55, p < 0.05$) and in the collaboration dimension, it is also positive and significant ($r = 0.71, p < 0.05$). Also, between organizational dimensions, the correlation coefficient is positive and significant among the factors. For instance, the correlation is highest between vision/goals and intrinsic rewards ($r = 0.47, p < 0.05$) or learning structures ($r = 0.42, p < 0.05$), between trust and intrinsic rewards ($r = 0.53, p < 0.05$) or job placement ($r = 0.51, p < 0.05$), between training and trust ($r = 0.47, p < 0.05$) or extrinsic rewards ($r = 0.45, p < 0.05$), between job placement and intrinsic rewards ($r = 0.58, p < 0.05$) or learning structures ($r = 0.47, p < 0.05$), between intrinsic/ extrinsic rewards and learning structures ($r = 0.64$ or $0.62, p < 0.05$) or communication flows ($r = 0.45$ or $0.42, p < 0.05$), and vice versa. These findings, therefore, indicate that the organizational factors in this study are necessary for KM implementation in University libraries in Nigeria.

Table 5: Correlation matrix of the Organizational Factors for KM Implementation in Federal University Libraries in Nigeria

	1	2	3	4	5	6	7	8	9
KM Implement.	1.00								
Vision/goals	1.00							
Trust	0.568	1.00						
Training	0.339	0.472	1.00					
Job placement	0.412	0.508	0.438	1.00				
Intrinsic rewards	0.468	0.531	0.413	0.582	1.00			
Extrinsic rewards	0.200	0.400	0.450	0.421	0.549	1.00		
Learning structures	0.416	0.486	0.426	0.475	0.643	0.619	1.00	
Communication flow	0.344	0.308	0.262	0.315	0.450	0.417	0.712	1.00

7.3. Implications of or Overall approach to KM implementation in federal university libraries in Nigeria

The results of this study, as shown in Tables 1 – 5, are quite revealing in terms of its implications for both policy and professional practices in federal university libraries in Nigeria. Any University Librarian wishing to implement KM must pay attention or be committed to the following organizational elements:

Formulating KM vision and goals:

The KM vision/goals must be formulated to provide a clear direction of KM practices. In this study, this variable has been found to correlate more with intrinsic rewards and learning structures. Since one of the core elements of KM is people, this correlation implies that in formulating the KM vision/goals, attention must be paid to how the people are to be rewarded to make them participate actively in KM. It also implies that the KM vision should be such that would encourage organizational learning. Intrinsic rewards and organizational learning have been found in the literature to be crucial for KM implementation, and in this study also, the respondents found intrinsic rewards and learning structures necessary for KM. Further to incorporating reward systems and organizational learning into the KM policy document of the university library, the KM vision must be aligned with the vision of the library. The KM policy document must also be made available to staff so that it becomes easy for the University Librarians to emphasize the importance of KM or refer to it from time to time.

Building trust among staff:

Within the top management dimension of KM is the issue of trust. This has been found to be a major barrier to KM. However, if there is an established culture of trust in the library, it will go a long way to foster KM success. Trust, in this study, was found to correlate more with intrinsic rewards and job placement. This means that the University Librarian or a KM leader must ensure that KM activities undertaken by staff are rewarded. It also means that staff placement or deployment in the library should not be a punitive measure, or rather should be based on experience, skills and tenure. Apart from building internal trust from rewarding KM efforts and placing staff in their right positions, the University Librarian as a KM leader should also welcome contributions from staff and maintain an open door policy. He or She should consider identification of knowledge gaps as necessary along with updating library policies and procedures regularly.

Developing human resources policy:

Undoubtedly, knowledge management is concerned with people. This has implications for KM implementation. Firstly, the core competencies required for KM implementation must be identified, and staff must possess the required skills to be able to participate in KM. Secondly, selecting staff for training and placing them in right positions should not be jeopardized. In this study, majority of the librarians agreed that training and staff placement are both crucial for KM implementation. As a KM leader, the University Librarian is expected to encourage self-improvement and sponsor staff to participate in conferences/ workshops, or to undertake formal training and short courses on knowledge management. It is equally important that staff members are rotated on the job, and people with valuable tacit knowledge identified and retained. Finally, the University Librarian should insist that library staff recruitment should be based on need.

Motivation of staff:

Staff motivation is also an issue in Knowledge management. It is not only important that the KM policy document must be made available to staff, but also necessary that staff should be 'pulled' to participate actively in KM initiatives. Librarians agreed in this study that having well established reward systems would definitely encourage staff to be part of the change towards implementing KM in university libraries in Nigeria. The University Librarians are challenged here to develop appropriate reward systems for their libraries. The reward systems should increase the interest of staff in their jobs, provide staff with more job opportunities, create a room for recording staff achievements, enhance job satisfaction and ensure that staff members are constantly receiving positive feedback. It is also necessary that University librarians are to ensure that incentives are given to staff members from time to time and also insist that appraisal system in the university library should be performance-based.

Fostering collaboration among staff:

Collaboration among staff is greatly required for the success of KM initiatives in libraries. This, however, depends on the prevailing organizational structure. This implies that the university library in Nigeria should be restructured to foster collaboration among staff. In this restructuring process, University Librarians should work towards making university libraries in Nigeria to become learning organizations. When this structure is established in the university library, it will facilitate communities of practice, mentorship and staff support systems. The librarians, in this study, also opted for top-down and bottom-up communication as a structure to be put in place and necessary for more collaborative activities in federal university libraries in Nigeria.

8.0. Conclusion

The success of KM in university libraries clearly depends on certain organizational elements or factors. In federal university libraries in Nigeria, these factors were found, from this study, to consist of top management leadership, human resources policy, compensation schemes and collaboration. The aspects of these factors that were of utmost importance for successful KM implementation in the university libraries studied include developing organizational vision and goals, building trust among librarians, training of staff and placing them in their right positions, motivating staff, creating an organizational learning environment and developing efficient communication system. It was also found that there was significant and positive relationship between these critical success factors. The strongest of this inter-relationship was found between communication flows and learning structures. This means that the federal university libraries in Nigeria must be redesigned to become learning organizations with a system that holds sway for top-down and bottom-up communication.

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