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Competencies for successful knowledge management applications in Nigerian academic libraries

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This paper aims to identify the competencies perceived to be essential for successful knowledge management applications in Nigerian academic libraries. The paper was guided by five specific objectives. A cross sectional survey approach was used for the study. Questionnaire was the main instrument to collect data from one hundred academic librarians who participated in the 47th Annual Conference/AGM of Nigerian Library Association held in Ibadan in July 2009 and 67 questionnaires were returned as valid for analysis which gives a response rate of 67%. This was considered adequate enough for the study. Data collected were analyzed using descriptive statistics of mean and standard deviation. The results of the study show that, the skills needed for successful knowledge management applications are KM cultural skills, leadership skills, strategic skills and restructuring skills. For effective application of knowledge management in Nigerian university libraries, it is important that librarians are trained to acquire the identified KM skills to face the challenges of knowledge economy. This is a fundamental study which reveals the relevance of knowledge management in Nigerian university libraries in line with competencies required for effective KM implementation.

Key words: Knowledge management, library administration, academic libraries, skills, competencies.

INTRODUCTION

The transition from industrial revolution to information revolution has provided a new platform for global economic development. This new platform recognizes knowledge and information as critical assets for institutions and organizations. These assets require proper management if the organizations would remain relevant in the global competitive environment. Knowledge management (KM) is therefore touted as a sustainable strategy for organizations to survive and maintain their competitive advantage in the present global economy. In an attempt to explain the meaning of knowledge management, the e-knowledge centre (2005) wrote that:

It is a disciplined approach to managing all the knowledge processes found in collectives (a set of people with common goals). KM is what we do to accomplish our goals faster and more effectively by delivering the right knowledge to right person at the right time and in the right context. By engineering human environments for optimal

production, transfer and usage of knowledge, we increase our ability to take effective action, compete and survive. Knowledge management will ensure the survival of an organization by leveraging collective wisdom to increase responsiveness and innovation. The relevance of knowledge management obviously lies in Clarke's (2004) assertion that the effective management of knowledge would reduce duplication, improve productivity and save a lot of cost. On the contrary, poor management of knowledge could lead to information overload and confusion as well as wasted manpower. Though, relatively a new concept in management theory, KM has remained a key issue in management literature for over two decades now. This lies in the fact that, organizational competitive power is highly dependent on the knowledge assets of the personnel. For this reason Mchobu (2007) contends that knowledge management is an important resource for accelerating growth in developing economies. This is because organizations in most developing countries would largely depend on KM to spur the creation of new products. According to him, this is better done through the sharing of complex knowledge within and outside the organizations. The pivotal roles of knowledge assets in the global economic development is strengthened by the

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comment of Joseph (1999), the former World Bank Chief Economist who recommends that, the shift towards knowledge-based economy requires a shift in the structures, away from top down hierarchical system such as networks, semi autonomous teams and other forms of matrix organizations. This implies that employers should be encouraged to develop their own capabilities, so that new knowledge would be identified and probably shared. This will in turn empower changes and learning activities.

Literature review

Knowledge management has for a long time been confined to major companies in the world. However, the present information environment where information and knowledge increasingly determine the fate of organizations' success, libraries as key players in the information industry are becoming more interested in knowledge management than ever before. This interest resulted in the approval of the Knowledge Management Section as IFLA section in December 2003 (IFLA, 2009). The KM section is a unit in IFLA Division IV (Bibliographic Control) . With this approval, the Library and Information Science professionals have continued to express the need for a deeper understanding of KM's many dimensions and its relevance to the profession. In line with this, Shanhong (2000) maintains that KM in libraries should be interested in effective research and development of knowledge, creation of knowledge bases, exchange and sharing of knowledge among library staff and even the library clientele. In a knowledge based economy like ours, the efficient management of knowledge is very important in achieving the organizational aims and objectives. This is because in the present global economy, the resources are mainly confined in the human capital where potential talents are resident. Thus, Shanhong (2000) and Dimitriades (2005) contends that, what places a particular organization above the other is the quality of the knowledge base (staff). This perhaps is why many organizations including libraries are focusing essentially on vocational training and lifelong education, as a mechanism of adding value to the quality of their knowledge assets represented in the staff. Though there is this fear that libraries and information sciences do not find it easy to accommodate KM because knowledge unlike information is difficult to control and manage (Vaegen, 2004), libraries are fast recognizing that to remain competitive in the present environment, KM is very vital aspect of library administration. Library as an organization therefore has resources consisting of the following: assets, capabilities, organizational process, attributes, information, knowledge, among others (Luthra, 2008), which are exploited to develop and implement its strategy (Barney, 1991). Any resource that will lead an organization to a

competitive environment must have the following four attributes, namely, it must be valuable, rare, imperfectly imitable and not to be substitutable (Barney, 1991; Maier and Remus, 2001) . Competency is an essential factor in the discussion of resource base of an organization. Competency is the ability to sustain the coordinated deployment of assets in a way that helps an organization achieve its goals. It is a complex bundle of skills that are difficult to imitate (Hamel and Prahalad, 1992). For an organization to reposition itself in the environment of competition, it requires competency building. The concept of building here is defined as any process by which a firm qualitatively changes its existing stock of assets or capabilities or creates new abilities, in areas that will help the organization achieve its aims. Competency building also involves the creation of new strategic options (Sanchez et al., 1996).

These competencies that emanate from the deliberate use and management of the organization's knowledge resources with the aim of gaining competitive advantage is referred to as KM competencies (Zheng, 2005, Luthra, 2008). These KM competencies are focused on the four domains of organizational resource base of culture, strategy, leadership and structure. Research has shown that, these are the critical KM competencies organizations must focus to be competitively ready. For instance, Akhaven et al. (2006) conducted a study of six successful companies in KM programmes and found out that issues pertaining to the strategy, leadership and culture were critical success factors of KM programme of the organizations. Similarly, Gold et al. (2001) and McDermott and O'Dell (2001) in separate studies, have identified technology, structure and culture, as infrastructural capabilities necessary for an organization to manage its knowledge assets. In the same way, Lam and Chua (2005) in their literature review of KM success factors, again underscored the issue that include having a clear KM strategy, that is in line with the goals, learning culture, leadership, as well as having a flexible organizational structure. Competency is therefore a very critical factor in knowledge management assessment of organizations. These competency requirements are usually identified using checklist. Some rules guiding competency checklist construction exist. Achebe (1998) citing Brown (1994) identified the following basic rules as guide to competency checklist construction.

Assessment of standards: This means that evidence must be collected to demonstrate that an individual has performed the element and its associated performance criteria across the full specified range of activity before that element can be enlisted. In addition, the enlistment of the activity of each element must be complete before the unit of competence can similarly be enlisted and the design issue completed for that unit.

Relationship between evidence and specified standards: This means that evidence should relate clearly and directly to specified standards. Studies in this area

Table 1. Descriptive statistics on the skills required for knowledge management.

S/n	KM strategy skills	Mean	Standard deviation
1	Skills for KM policy development in organization	3.28	0.54
2	Skills for linking knowledge management with strategic results	3.11	0.57
3	Skills for quantitative metric application in measuring knowledge management.	2.98	0.87
4	Skills for mapping the process after flow of knowledge management activities	2.88	0.98
5	Skills for creating values for organization's knowledge-based assets	3.63	0.43
	Knowledge management strategic skills	3.18	0.68

also revealed other guides and facts to competency as follows:

1. There should be sufficient evidence to cover the full range of context specified within the standards.
2. There should be comparison or contrast between practitioners since evidence relates directly to individual assessment.
3. Evidence should be generated in realistic conditions using valid assessment methods (Simpson, 1990; Slater, 1990).
4. The designer of competency instrument is at liberty to choose between useful guides and also to apply the knowledge of all or any that is worthwhile.

However, literature review showed that no standards exist for the assessment or identification of KM competencies of staff in organizations. To construct the KM competency checklist appropriate for this study, the researchers relied on existing literature on this area. This helped to identify tasks to be carried out and the process required to carry out the tasks in order to identify relevant skills. The tasks are first of all arranged into appropriate themes or actions or related units of performance. These themes as identified from the literature include culture, strategy, leadership and structure. To identify relevant skills within each theme, a number of tasks or actions are outlined as appropriate.

Generally, the literature on knowledge management has identified two schools of thoughts. The first holds the view that KM is all about management of information. The researchers holding this view believe that KM is about information technology. The second school of thought holds that knowledge management is about management of people. The scholars and researchers in this area believe that KM is concerned with developing knowledge processes. They also believe that, it is concerned with the development and improvement of employee competencies for better performance. While the present study is concerned with the improvement of employee competencies, the literature reveals dearth of empirical research in this area. The only empirical work in this area especially in Nigeria was carried out by Ezeani et al. (2008). The authors tried to identify the level of KM applications to global information services in academic libraries in South Eastern Nigeria. This empirical work

revealed that librarians studied, lacked the skills required for knowledge management in university libraries. This resulted in low level of KM applications in the academic libraries studied. The present study is therefore intended to provide an inventory of competencies or skills required by librarians for successful knowledge management applications in university libraries in Nigeria.

METHODOLOGY

The survey approach was used to carry out this study. The population of the study consisted of the participants at the 47th Annual Conference/ AGM of the Nigerian Library Association (NLA) held in Ibadan in July 2009. The participants were drawn from the Academic Library Section of the NLA. From the attendance registrar opened for the Academic Library Section, it was found that a total of one hundred librarians participated in the conference. These 100 participants constitute the population of this study. Since this number is less than 200, the entire population was then used for the study as suggested by Yamane (1967). The main instrument for data collection for the study was questionnaire. Out of the 100 copies of the questionnaires distributed, 67 copies were returned. This gives a response rate of 67%. This was considered adequate enough for this study. This is supported by published tables which provide the sample size for a given set of criteria. For instance, using one of the tables published by Yamane, (1967), if the level of precision is $\pm 10\%$, the sample size of a population size of 100 is 51, and this is below the researchers' acceptable value of 67 for this study.

The responses to the items in the questionnaire were based on a 4-point scale of 1 – highly not essential, 2 – not essential, 3 – essential, and 4 – highly essential. In order to effectively analyze responses, nominal values were assigned to the response categories in the scale and computation carried out, while decisions on the cut-off points were made based on Gregory and Ward (1978) formula for determining the lower and upper limits in means thus:

- 0.50 to 1.49 = highly not essential
- 1.50 to 2.49 = not essential
- 2.50 to 3.49 = essential
- 3.50 to 4.49 = highly essential.

RESULTS

Table 1 shows the skills for developing KM strategy in academic libraries in Nigeria. The findings reveal that KM strategies are essential in these libraries. The skill rated

Table 2. Descriptive statistics on the skills required for creating a knowledge management culture.

S/n	KM cultural skills	Mean	Standard deviation
1	Skills for fostering good learning environment	3.23	0.52
2	Skills for creating openness and trust	3.21	0.53
3	Team working skills	3.35	0.48
4	Relationship skills	3.39	0.45
5	Skills for creating staff supportive environment	3.28	0.57
6	Listening/ dialoguing skills	3.28	0.57
7	Skills for fostering creativity and new ideas	3.58	0.50
	KM cultural skills	3.33	0.46

Table 3. Descriptive statistics on skills required for designing or restructuring academic libraries for KM success.

S/n	KM structural skills	Mean	Standard deviation
1	Individual decision making skills	3.00	0.67
2	Skills required to develop system of communication	3.16	0.59
3	Skills required to develop KM vision and goals	3.26	0.57
4	Skills required to develop performance appraisal system	3.14	0.60
5	Skills required to develop performance-based reward system	3.05	0.64
6	Skills required to develop social networks or communities of practice	3.00	0.65
7	Skills required to develop and apply promotion system to achievement	3.05	0.64
	KM structural skills	3.09	0.66

Table 4. Descriptive statistics on the skills required for providing leadership to knowledge management in academic libraries in Nigeria.

S/n	Leadership skills	Mean	Standard deviation
1	Participative decision making skills	3.37	0.60
2	Trustworthy skills	3.47	0.57
3	Collaborative skills	3.23	0.64
4	Change management skills	3.07	0.66
5	Innovative skills	3.30	0.63
6	Communication skills	3.36	0.61
	Leadership skills	3.30	0.63

as highly essential, is the skill for creating value out of the knowledge-based assets in academic libraries in Nigeria (3.63). Skills in the area of KM policy development (3.28), linking KM with results (3.11), mapping knowledge processes (2.98) are all essential in knowledge management implementation in academic libraries in Nigeria.

Table 2 shows the skills required for creating KM culture in academic libraries in Nigeria. The results show the KM cultural skills are essential in these libraries. The skill that was rated highly essential is the creative and innovative skills (3.56). Other essential skills as shown in Table 2, include those required in the following areas; creating good learning environment (3.23), creating openness and trust (3.21), team working (3.35), building

relationships (3.39) and listening/dialoguing (3.28). Table 3 shows the skills required for restructuring academic libraries in Nigeria for successful implementation of knowledge management. The result shows that restructuring skills are essential in these libraries. These skills are required in the areas of decision making (3.0), communication (3.16), developing KM vision (3.26), developing social networks (3.00) and developing reward systems or compensation schemes (3.14).

Table 4 shows the skills required to provide effective leadership for knowledge management implementation in academic libraries in Nigeria. The results show that leadership skills are essential requirements in these libraries. These skills are required in the following areas; participative decision making (3.37), building trust among

Table 5. Summary of descriptive statistics on the areas of skill development for knowledge management success in academic libraries in Nigeria.

S/n	Skill areas	Mean	Standard deviation	Rank
1	KM strategy	3.18	0.66	3rd
2	KM culture	3.33	0.46	1st
3	Restructuring of academic libraries for KM	3.09	0.66	4th
4	KM leadership	3.30	0.63	2nd

staff (3.47), collaboration (3.23), change management (3.07), innovation (3.30) and communication (3.36).

Table 5 shows the areas of skills development of staff for knowledge management success in academic libraries in Nigeria. Even though the four skill areas are essential, the respondents were of the opinion that skills development of staff would first and foremost start from the area of creating knowledge management culture in academic libraries in Nigeria (3.33). This will be followed by training some staff to be KM leaders (3.30). The next area of skills development is KM strategy (3.18) while the last skills development area is restructuring of academic libraries for KM success.

DISCUSSION OF FINDINGS

The finding of the study is very revealing as it concerns knowledge management in academic libraries. The result shows that librarians require skills for knowledge management strategy. This is essential in creation of values for the organization's knowledge based assets and development of policies in organization. Findings also indicated that librarians require quantitative metric skills for the application and measurement of knowledge management and skills for mapping out processes are equally essential in developing strategy for knowledge management. These findings corroborate the studies of Hamel and Prahalad (1992) which revealed the relevance of competency building in the strategic management of organizations. This is equally in line with the position of Sanchez et al. (1996) who remarked that, competency building demands the creation of new strategic options in organizations. The implication is that for an organization to fully develop its KM strategy, it should embark on capacity building of the staff who are the knowledge base of the organization.

For the skills required by librarians in the development of knowledge management culture, findings show that, skills for fostering learning environment and skills for creating openness and trust are all essential. The development of KM culture also requires skills that would provide the librarians, the ability to imbibe the culture of team work, good interpersonal relationship with colleagues and the skills for creating staff supportive environment. It is also important to observe that the librarians require listening/dialoguing skills, in addition to

skills for fostering creativity and new ideas. This is not surprising since KM is always receptive to changes emanating from information and communication technology which currently drive knowledge. These knowledge management cultural skills are also in line with the position of Stiglitz (1999), in his recommendation that the shift towards knowledge-based economy requires a shift in the structures away from top down hierarchical system such as networks, semi autonomous teams and other forms of matrix organizations. The belief is that with an ideal work environment where staff interact freely, team spirit is encouraged the new knowledge would be created through cross pollination of ideas.

On the development of KM structure, the findings show that there are some skills that are essential to librarians. One of these skills is individual decision making skills. It is also essential that librarians should possess skills required for the system of communication, KM visions and goals, performance appraisal system and performance based reward system. Other essential KM structural skills required by librarians are skills to develop social networks or community of practice and skills for the development and application of promotion system to achievement. These skills, if well developed would enhance the success of KM in organizations because the reward system would encourage staff to begin to share knowledge, which is one of tenets of knowledge management.

The findings also reveal that, all the KM leadership skills identified are found to be essential. The most essential KM leadership requirement is trustworthy skills.

Other essential leadership skills for knowledge management are participative decision making skills, collaborative skills, change management skills, innovative skills and communication skills. This is not surprising because the literature reveals that, the success of knowledge management in an organization depends on the extent of top management support or the organization's leadership qualities.

Finally, the summary of findings reveals that of the four KM competencies investigated, KM culture is the area where respondents believe that librarians would need more skills. It ranked first among the four areas. This is followed by KM leadership skills which has a mean score of 3.30. The next two are KM strategy and the restructuring of academic libraries for knowledge management. The ranking of these four competency

areas is in line with the findings of Akhaven et al. (2006), in their study of six successful companies in KM programmes. They found out that, the issues about leadership, culture and strategy are critical success factors for organizational KM programmes.

Conclusion

Competency building for knowledge management in Nigerian libraries has been discovered as a critical factor, which will drive management in the modern libraries. This study has identified the skills required in the four areas of competency building (leadership, culture, strategy and structure) for knowledge management in Nigerian academic libraries. The critical question is whether librarians who are in charge of twenty-first century Nigerian academic libraries possess these skills. What is the fate of Nigerian academic libraries, if these skills are absent among the librarians. Since KM is the key ingredient in the survival of organizations in the global competitive market, Nigerian academic libraries cannot afford to remain aloof to the acquisition of these skills.

The academic libraries therefore should restructure their management pattern to KM-based objectives. The knowledge asset of any organization revolves round the staff. The implication is that, academic libraries should embark on the training and retraining of librarians to acquire the KM skills identified in this study. These skills are necessary and sufficient conditions for the proper repositioning of academic librarians to face the challenges of the present day realities. In addition, there is the need to introduce programmes that will facilitate team work among librarians for this will propel KM in academic libraries.

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