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Investigating Knowledge Management Strategies in Central University Libraries in India

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ABSTRACT

The aim of this research paper is to investigate the knowledge management strategies adopted by the libraries of central universities in India. Review of literature, reveals that codification and personalisation have been considered knowledge management strategies for sharing explicit and tacit knowledge within the library system. To determine the most used knowledge management strategies in libraries, 14 tools (seven each for codification and personalisation) were recognised from the literature review and taken for examination. A total of 116 library and information science professionals of 23 central universities spread across India were surveyed through a web-based questionnaire to explore the knowledge management strategies followed and data analyses were conducted by using SPSS version 22.0. The findings of the research show that both codification and personalisation have been used in libraries, though the balance of codification and personalisation was not in 80-20 ratio. Between codification and personalisation, codification was found to be the most useful strategy with collective mean difference, i.e., 0.312. This study has practical implications for those who are not fully aware of the prominence of knowledge management and how knowledge management strategies can be used to gain a competitive advantage.

Keywords: Knowledge management, codification strategy, personalisation strategy, central university, libraries, India

1. INTRODUCTION

The knowledge, as such, being the most important resource must be protected, cultivated and above all shared among the organisational members. Now, the dissemination of knowledge (among the individual members) aids in the exposition of some innate/inherent virtuosity and prowess that through the mode of managing 'tacit knowledge' proves handy for the collective workforce of an organisation. However, managing strategies of 'explicit knowledge' run parallel to tacital expertise in gearing up in the competitive ambience as in ways that makes information easy to find and facilitates learning skills. Both the types of knowledge (explicit and tacit) can be inculcated in a healthy working environment by maintaining proper knowledge management strategies.

A Knowledge Management (KM) strategy is simply a plan that describes how an organisation will manage its knowledge better for the benefit of that organisation and its users. A good knowledge management strategy is closely aligned with the organisations overall strategy and objectives[1].

2. CODIFICATION AND PERSONALISATION: AN OVERVIEW

The ultimate aim of each and every organisation is to manage knowledge in order to gain competitive advantage. An organisations internal competitive strategy should be reflected through its KM strategy[2]. According to Hansen[2], e*t al*., there are two types of knowledge strategies for sharing and managing knowledge in the organisation, *viz*., codification strategy and personalisation strategy.

The codification strategy deals with the extraction of explicit knowledge from the person who generate it, stored it in databases, make it available so that it can be exploited by anyone in the organisation[3]. The accomplishment of the codification strategy relies on the usage of information technologies, for example groupware, decision support tools, intranets, knowledge repositories and data warehousing[4], to improve the quality and promptness of knowledge creation and its dissemination within the organisation[5]. The key advantage of codification strategy is the reuse of explicit knowledge through which an organisation can save money, time and manpower[6]. Codification heavily depends on the Information technology as it requires IT for constructing and maintaining web pages, expert systems, repositories, etc.[3] On the other hand, personalisation strategy focuses on the tacit knowledge and its sharing within the organisation. This can happen from the development of networks by which employees can share their tacit knowledge. The knowledge which embedded in the minds of people[7] difficult to codify and can be transferred in one to one talk, dialogue between employees, brainstorming sessions, e-mail, etc.[2,3].

In summing up, both codification and personalisation strategies are considered as the key function of a library and offer various kinds of benefits. In this competitive age, for the survival of the organisation, managing both codification and personalisation strategy should be done with utmost care and should be the prime motto of any library.

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3. BALANCING CODIFICATION AND PERSONALISATION

To get the optimum advantage, how much an organisation balance the two strategies, i.e., codification and personalisation? Few scholars preferred a biased approach, However others recommended that both strategies have equal prominence. Hansen[2], *et al.*, suggested that companies in their products inclined to accept one of the two strategies predominantly and merely use the other as a complementary strategy. For example, in Andersen Consulting, Ernst and Young, and Dell focused on the retrieval of codified knowledge and codification strategy predominantly followed, however, in all these companies, personalisation was not omitted, but followed in a scanty manner. Conversely, McKinsey, Boston Consulting Group and Bain & Company, it is found that personalisation strategy most suitable in these organisations and dominated over codification strategy.

If organisations want to successfully manage their knowledge, then they must use both codification and personalisation in 80-20 ratio, i.e., an organisation must implement either 80% personalisation and 20% codification or vice-versa, to efficaciously manage its knowledge. Some scholars also mentioned that trying to focus equally on both the strategies can create hazard within the organisation.

In support of these opinions, many studies have been conducted by scholars such as Haesli & Boxall[8], who conducted a study of two high technology manufacturing companies, the result of the study shows that both companies followed one strategy in a predominant way. Though, Jasimuddinet[9], *et al.*, argued that in order to gain key benefits, both codification and personalisation need to be integrated. The combination of both strategies led to a great need for companies to improve the way in which they manage their knowledge. Choe[10] enlightened that a KM strategy as integrated approach, i.e., it's a combination of both codification and personalisation strategy. In this integrated approach, the balance of the exploitation and exploration are well achieved and maintained. Furthermore, Ng, Alex Hou Hong[11], *et al.* explained the relation between personalisation strategy and codification strategy into a concept of integrated KM strategy as shown in Fig. 1.

Figure 1. An integrated KM strategy model.

These strategies comprise sociological and organisational change and also procedures that depend on ICT. Furthermore, no single solution can address the KM needs of an entire organisation, and both human/organisational and computational aspects of KM will be applicable in any organisation[12]. The knowledge management strategy must be in accordance with the organisations objectives and strategies and intended to create a sustainable environment within the organisation[6].

4. OBJECTIVES

The ultimate purpose of this study is to explore the knowledge management strategies followed by the central university libraries in India. The objectives of the present study are to:

(a) Ascertain the current state of adoption of the knowledge management strategies–codification and personalisation in the central university libraries in India.

(b) Explore the tools and techniques used for managing and sharing knowledge in the central university libraries in India, and

(c) Investigate the dominated knowledge management strategy (codification or Personalisation) in central university libraries in India.

5. RESEARCH METHODOLOGY

There are various methods of research available such as descriptive, experimental historical, etc., the researcher has adopted survey method as one of the descriptive research methods to investigate the knowledge management strategies followed by the central university libraries in India through different data collection techniques.

5.1 Literature Survey

The researcher has conducted a survey of relevant published literature to collect the required information and to understand and comprehend the state of the art of knowledge strategies, etc.

5.2 Population and Selection of Sample

The population of the present study consists of the staff of central university libraries in India, which have library website and have mentioned e-mail IDs of librarians in their websites. Due to a large number of libraries, it was not feasible to include all the libraries in the study. Therefore, only selected libraries have been included in the study. For this study, the investigators have selected thirty central university libraries out of 45 with the help of simple random sampling. Out of 30 Central university libraries, 7 libraries didn't respond inspite of reminders; therefore, the present study was conducted only on 23 Central university libraries in India.

To get the maximum accuracy in the results, census sampling method was used in which potential participants for the study comprised of all academic librarians (university librarian, deputy librarian, assistant librarian), therefore no sample was drawn and e-mail IDs of all the librarians were taken from the library websites. For the purpose of data collection, a web-based questionnaire was prepared (https://freeonlinesurveys.com). A total of 116 questionnaires were sent to the librarians through e-mail, out of which only 68 completely filled questionnaires were received, representing the response rate of about 58.62%.

5.3 Content of Questionnaire

The questionnaire was organised in two parts. Part A contained the demographic details such as age, gender, and designation, etc. and Part B contained 14 tools (7 each for codification and personalisation) identified from literature review and taken for analysis. The scoring was done using five point Likertscale where 1 denotes 'Not Used' and 5 denotes 'Extreamely Used'. In order to augment something or to eliminate lacunae in the questionnaire, a pilot study was conducted prior to administration of questionnaire to the librarians.

5.4 Data Collection Methods

For the present study, several techniques are adopted for collecting relevant and authentic data. Investigators have used a web-based questionnaire and document review methods for collecting the necessary data to achieve the objectives set forth in the research work.

6. DATA ANALYSIS & INTERPRETATION

The data collected from librarians/librarian-in-charges of Central universities through various data collection techniques have been organised, analysed, tabulated, and interpreted. Descriptive statistics were used to engender retort to the research queriesfor directing the study. Descriptive statistics encompassed calculations of mean, standard deviations, frequencies and percentages.

6.1 Usage of Codification Tools to Manage Knowledge in the Central University Libraries in India

In order to know about the usage of codification tools, their mean score values are taken into account to explore their usage in managing the knowledge within the central university libraries in India. Analysis of data shows mean score values of seven tools of codification ranging from 4.250 to 2.312 as demonstrated in Table 1.

Among all the tools of codification strategy, Intranet and Information Retrieval System, with equal mean 4.250, found to be the most utilised tool to enhance collaboration and information transfer in all the central university libraries undertaken for the study. In support of this, Ali & Nisha[13] suggested that libraries ought to develop another web and intranet development orchestrating process to enhance knowledge sharing culture and attain the objectives of

Table 1. Technologies, tools and processes supporting codification strategy, rated on five point scale

Knowledge strategy	Technologies, tools, and processes	Code	Mean
Codification	Intranet	C1	4.250
	Information retrieval system	C2	4.250
	Document management/content management system	C3	3.687
	Web-based training	C4	3.312
	Data mining	C5	3.187
	Multimedia repositories	C6	2.812
	Benchmarking	C7	2.312

the library in a more robust manner. It is very interesting that mean values for Document management and Web-based training were 3.687, 3.312 respectively, and these two codification strategies, used by the librarians' for the purpose of catering information needs and delivery of documents to their users. The mean score value of Data mining was 3.187, which shows that librarians are efficaciously extracting information and knowledge from different resources and make it available for the use to their user. This is inconsistent with Okerson[14], who in his research recommended thatlibrary professionals build up the aptitude to bolster their users by making data resources accessible to them on propitious terms and fortify their mining endeavors. Furthermore, mean value of multimedia repositories was 2.812, showing that libraries are developing multimedia repositories to provide online learning, and it also helps in managing and sharing the vast amount of literature within the organisation. It was also found from the analysis, that bench-marking scored lowest mean value (2.312) among all the codification strategies as shown in Fig. 2.

Taken as a whole, all the tools of codification strategy are used by the libraries in a more or less manner and libraries are well fiercely managing and sharing the knowledge through codification strategy.

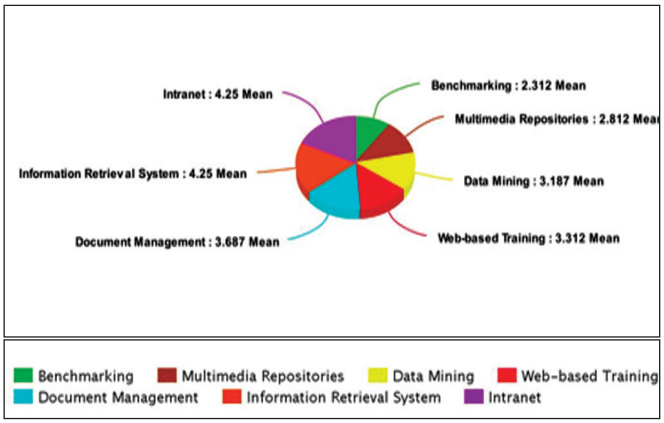

Figure 2. Usage of Codification tools/process in central university of India.

6.2 Usage of Personalisation Tools to Manage Knowledge

'Personalisation' approach relies on the sharing of inferred learning by direct contact from individual to-individual; or in groups. To know about the usage of personalisation tools, mean score values of these tools give information of their utilisation in central university libraries in India. An intensive examination demonstrates that mean score values of personalisation tools are ranging from 4.625 to 1.937 as exhibited in Table 2.

In respect of personalisation strategy, e-mail and web 2.0 were scored highest mean (4.625), found to be the most utilised tools for sharing tacit knowledge among the library staff and users in all central university libraries in India. Husain[15] pointed out that, to induce the potential benefits,

Table 2. Technologies, tools and processes supporting personalisation strategy, rated on five point scale

Knowlede strategy	Technologies, tools, and processes	Code	Mean
Personalistion	Email and web 2.0 applications	P1	4.625
	Mentoring/tutoring	P2	3.375
	Phone calls	P3	3.250
	Communities of practice	P4	3.062
	Expertise locator	P5	2.750
	Video conferencing	P6	2.625
	Story telling	P7	1.937

libraries are adopting web 2.0 applications to facilitate users to apportion conceptions, opinions, events and intrigues within their individual networks over the web through e-mailing and instant messaging. Moreover, mentoring was found to be the second most utilised personalisation strategy with the mean value 3.375. By mentoring, experienced employees communicate their experiences, which they gained throughout their careers to the new colleagues. Additionally, phone call stake the third place with the mean 3.250 to transfer the information and knowledge within the library system. The explanation behind the in-depth utilisation of telephone calls can be clarified by the fact that this technology has been accessible for a considerable length of time and library professionals are acquainted with them. Their utilisation is regularly the employees' first and instinctual response when looking for help or suggestion[5]. Furthermore, communities of practice, expertise locator and video-conferencing were found to be used as a personalisation strategy, but not as much as the above mentioned strategies. The analysis also reveals that, story telling is the least used (1.937) personalisation strategy in Fig. 3.

These results justified by the fact that knowledge sharing culture is generally lacking among the library professionals of Central universities in India. Ali & Daud[16] suggested that to better engage in knowledge strategy, library professionals ought to be more competent and also there must be vestibule programs for the library professionals.

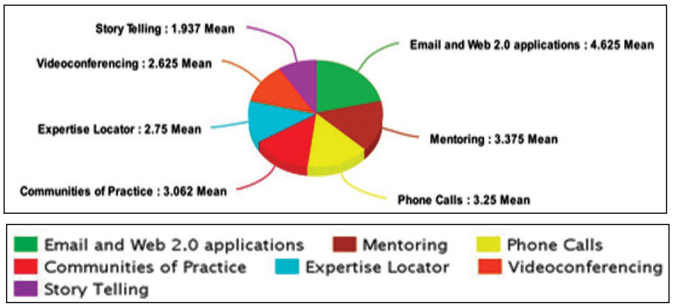

Figure 3. Usage of codification tools/process in central university of India.

6.3 Leading Knowledge Management Strategy in Central University Libraries in India

A wide range of mechanism can be used for organisation members to share and transfer knowledge. The choice of mechanism depends on its suitability for the stage of sharing (awareness or transfer), and the types of knowledge (tacit or explicit, degree of embedded). With the intention of identifying the dominating knowledge management strategy in libraries, aggregate mean scores of tools of both codification and personalisation strategies were ascertained and compared.

The rigorous investigation disclose (Table 3) that both the knowledge management strategies are used in an equilibrium way. However, codification strategy is marginally commanded over personalisation with a minor distinction in their aggregate mean scores, i.e., 0.312. It can be concluded that these knowledge management strategies were known by majority of librarians and exploited by the library professionals to manage the organisation's knowledge effectively. The extensive usage of these KM strategies by librarians improves the knowledge sharing culture within the libraries.

Table 3. KM strategies: codification vs personalisation

KM strategies	Mean	Difference in mean
Codification	3.401	0.312
Personalisation	3.089	

7. MAJOR FINDINGS

Following are the major findings of the study carried out to comprehend about the knowledge management strategies in central university libraries of India.

(a) The present study divulges that all the librarians are aware about the concept of Knowledge Management.

(b) All the 23 libraries (100%) under study have followed knowledge management strategies to manage and share knowledge within the central university libraries in India.

(c) To improve communication and better flow of information and knowledge within the Central university libraries under study, intranet and information retrieval system were found to be the most utilised tool among all tools of codification strategy.

(d) Among all the tools of personalisation strategy, e-mail and web 2.0 found to be the most utilised tools by the library professionals and users to share tacit knowledge in central university libraries of India.

(e) Some of the tools of both personalisation and codification are used to a minimum extent, *viz*., storytelling, benchmarking, it is due to the lack of understanding, knowledge, technical aspect, etc.

(f) With respect to the dominating knowledge strategy, codification found to be dominated over personalisation with a slight difference of 0.312 in the collective mean scores.

8. SUGGESTIONS AND RECOMMENDATIONS

Based on the findings of the present study the following suggestions and recommendations are as follows:

(a) The Government of India may take steps to design all inclusive policies to develop a knowledge management environment in each central university libraries in India

(b) There must be an adequate ICT infrastructure for setting up and maintaining knowledge management strategies

(c) There must be vestibule training programs for the library personnel in which additional skills should be provided to the library professionals

(d) There is a responsibility for the LIS institutes in India, to include some courses on knowledge management in the LIS curriculum by which library professionals can better understand about the concept of knowledge management and its applications in academic libraries.

9. CONCLUSIONS

The ultimate aim of this study was to identify the knowledge management strategies followed by the central university libraries in India. Codification and personalisation found to be the knowledge strategies to manage and share the information and knowledge within the libraries. Among all the tools of codification strategy, intranet and information retrieval system were found to be the most utilised tool in order to facilitate knowledge sharing culture in libraries. On the other hand, e-mail and Web 2.0 were the most utilised tools of personalisation strategy, to share tacit knowledge among library staff and users. It is noted that, some of the tools of both codification and personalisation were not used that much as it should be, due to the lack of competency in library professionals, insufficient ICT infrastructure, lack of technical skills. However, in India, Central university libraries involved in both the knowledge strategy practices while, the codification strategy slightly dominating over personalisation. It is worthy to mention here that, for the better knowledge sharing culture and free flow of information, the issue of proper balance of codification and personalisation in libraries demands rigorous investigation. In this direction, longitudinal studies may unveil the right balance of these two strategies in the Central university libraries in India.

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