DESIDOC Journal of Library & Information Technology, Vol. 36, No. 6, November 2016, pp. 405-410 DOI: 10.14429/djlit.36.6.9588

Perception and Implementation of Knowledge Management by University Librarian in India

S.Sudarshan Rao

Department of Library & Information Science, Osmania University, Hyderabad – 500 007
E-mail: yesyesrao@yahoo.com

ABSTRACT

The paper defines knowledge management (KM) and states its purposes, advantages. It is the original research work conducted on 50 university librarians in India to find out their perception and understanding on KM and its implementation in universities/university libraries. The major findings of the study are: KM is more of information-intensive activity than the information technology- based; large majority (70.0 %) of the university librarians possess high level of understanding and knowledge on KM, which in fact, is a prerequisite for implementation of KM in the institutions or libraries; KM enhances the performance of libraries; and non-availability of required library professionals with IT skills and training is the major constraint in implementation of KM in academic institutions.

Keywords: Knowledge management university librarians, knowledge management perception- university librarians, knowledge management implementation.

1. INTRODUCTION

"Knowledge management (KM) a new field within the discipline of social sciences, is receiving wider attention by varied kinds of professions, organistions and individuals, such as business administrators, management professionals, IT and computer science professionals, library & information science professionals, etc." Both the corporate business organisations, and service organisations, such as academic, healthcare, and research have been showing inclination for KM systems implementation for various reasons like competing with the global markets, maintaining their brand image, advancing research and innovations, furthering refinements, and improving their products and services.

The Encyclopedia of Library & Information Science defines knowledge management as 'A management practice that uses an organisation's intellectual capital to achieve its organisation's mission'. The IFLA knowledge management section provides the working definition of KM as 'KM is a process of creating, storing, sharing, applying and re-using organisational knowledge to enable an organisation to achieve its goals and objectives.'

1.1 Importance and Objective of KM

The KM is found important for sustainability of organisations in the globalised competitive world. Jawadekar[1] states that KM requires efficient management of Knowledge assets of the organisation. In a knowledge driven organisation, KM enables to generate innovative strategies for growth and improvement.

Davenport, *et al.*, as stated by Rowley[2] identified following four broad types of KM. The objectives of the present study are to:

(a) Create knowledge repositories

(b) Improve knowledge access, or to provide access to knowledge or to facilitate its transfer amongst document scanning and sharing tools and telecommunications networks

(c) Enhance the knowledge environment, so that the environment is conducive to more effective knowledge creation, transfer and use

(d) Manage knowledge as an asset, and to recognise the value of knowledge to an organisation

The objective of the study is to find out the level of understanding on knowledge management by the university librarians in India and their perception on implementation of KM in university libraries.

1.2 Hypotheses

(a) University librarians in India possess adequate knowledge and understanding on KM and hence they practice KM in academic institutions.

(b) University librarians in India consider knowledge management as an information technology- intensive activity and different from information management.

(c) Due to the non-availability of library staff with IT skills and training, KM is not practiced in majority of the university libraries in India.

2. METHODOLOGY

For the present study, analytical and descriptive methods are adopted.

Received 5 January 2016, revised 27 September 2016, online published 30 November 2016

The target population of the study is the head of the university libraries (librarians) in India. The sample studied is 50 university/higher education institutions' libraries, which constitute almost one tenth of the total population of university libraries in India.

For the purpose of conduct of the study, the researcher has collected the primary/empirical data from the librarians of 50 university libraries, using questionnaire technique. Statistical Package for Social Sciences (SPSS) software, Ver. 17 is used to process the data.

3. DATA ANALYSIS AND INTERPRETATION

The total sample of 50 (fifty) respondents of the study comprises of 29 (58.0 %) general university librarians, and 21 (42.0 %) technical university librarians, representing all regions of India. The technical universities include agricultural, law, engineering, etc., universities, including the NITs (National Institutes of Technology.) Thus, the sample represents all kinds of higher education institutions and from all parts of the country.

The university librarians were asked to express their perception/understanding and knowledge on KM by ranking from one to five, using the scale one being the highest rank and five being the lowest rank for the following statements, viz., KM is information- based, KM is technology-based, and KM is culture or management - based activity. Further, it was hypothesised (Hypothesis 2) that 'Knowledge management is an Information Technology (IT) intensive activity and different from information management'. The data/opinions obtained in this regard (i.e., the mean scores of the responses) are presented in Table 1.

3.1 Librarians' Perception on Knowledge Management (Mean Values)

It was observed that the librarians of state universities ($\bar{x}$ =1.40), and deemed universities ($\bar{x}$ =1.40) gave top rank by considering KM as an information intensive activity, followed by the private universities ($\bar{x}$ =1.50), and central universities gave it the lowest rank with a mean value of 1.62.

As regards, KM as more of technology - based activity, private universities rated it as high ($\bar{x}$ =2.00), followed by state universities ($\bar{x}$ =2.04) and central universities ($\bar{x}$ =2.19), in the decreasing order. The lowest rank to it (i.e., KM is technology - based) was given by the deemed universities with mean value of 2.20. Probably, this could be the reason, majority of the private and state universities did not implement KM in their universities, as they might be either technologically not conversant or use of technology involves high costs which they cannot afford.

With regard to the consideration of 'KM as Culture & Management-based activity', Central universities ranked it as the top priority ($\bar{x}$ =2.19), followed by state universities ($\bar{x}$ =2.32) and deemed to be universities with the mean value of 2.40.

On the whole, the understanding/perception of all types of university librarians on KM in the decreasing order: KM is information-based ($\bar{x}$ =1.48), followed by technology based ($\bar{x}$ =2.10), and lastly it is culture and management-based activity ($\bar{x}$ =2.30). The hypothesis-2 is rejected as it is found from the university librarians' perception that KM is more of information-intensive activity than the information technology-based activity.

The perspective/understanding of KM by the university librarians is further explored in detail, on various KM related concepts or statements. Further, it was also hypothesised that 'University librarians in India possess adequate knowledge and understanding on KM'.

Hypothesis 1

The data collected from the respondents on this aspect is presented in Table 2. The Likert's Five Point scale with, values one for Don't Agree, two for 'Somewhat Agree, three for Can't Say', four for Agree, and five for 'Strongly Agree' is used to assess the responses of the respondents.

3.2 University Librarians' Understanding on KM

With regard to the respondents' perception on 'knowledge management is another new name for the old Library & Information management', considerable section of respondents, that is more than half of them ($\bar{x}$ =2.86 out of 5.00) have endorsed this statement. The librarians of the central universities scored better with ($\bar{x}$ =3.25), followed by state university ($\bar{x}$ =2.92), private universities ($\bar{x}$ =2.25), and the deemed universities scored less on it ($\bar{x}$ =1.80). Surprisingly, the F value presented in table 2 suggests that the mean variation is statistically insignificant. In other words, the librarians of different types of universities do not vary in their

Table 1. Librarians perception on knowledge management (mean values)

Type of university	Information-based	Rank	Technology-based	Rank	Culture and management-based	Rank
State	1.40	1	2.04	2	2.32	2
Central	1.62	3	2.19	3	2.19	1
Deemed	1.40	1	2.20	4	2.40	3
Private	1.50	2	2.00	1	2.50	4
Total	1.48		2.10		2.30	

Table 2. University librarians understanding on KM

KM statements		N	Mean	Std. deviation	F-value (d.f.=3,49)	P
KM is a new name for old lib. &inf. management	State	25	2.92	1.288		
	Central	16	3.25	1.238		
	Deemed	5	1.80	1.304	1.985	0.510
	Private	4	2.25	1.258		
	Total	50	2.86	1.309		
KM is an extension of information management	State	25	3.68	1.069		
	Central	16	4.00	.894		
	Deemed	5	4.00	.000	0.698	.558
	Private	4	4.25	.500		
	Total	50	3.86	.926		
KM can be practiced in academic libraries	State	25	3.28	1.429		
	Central	16	3.88	1.408		
	Deemed	5	3.60	1.517	1.562	.211
	Private	4	4.75	.500		
	Total	50	3.62	1.413		

responses on 'considering KM as another new name for the Library & Information management'. With regard to the perception of the respondents on 'KM is an extension of Information management', majority ($\bar{x}$ =3.86) of the respondents have supported the statement. Among all types of the university librarians, private universities scored better ($\bar{x}$ =4.25) followed by Central and Deemed universities ($\bar{x}$ =4.00). It was the state universities who were found least on it ($\bar{x}$ =3.68). Surprisingly, the F value presented in the table 2 suggests that the mean variation is statistically insignificant. In other words, the librarians from different types of universities do not vary in their perception and understanding on 'KM is an extension of Information Management', as majority of them supported it.

With regard to the statement 'KM can be practiced in Academic libraries', majority of the respondents (Mean=3.62) from all types of university libraries supported this statement. Among them, private universities scored better ($\bar{x}$ =4.75) followed by central universities ($\bar{x}$ =3.88), deemed universities ($\bar{x}$ =3.60), and state universities ($\bar{x}$ =3.28). However, the F value presented in the table 2 suggests that the mean variation is statistically insignificant. In other words, the understanding of different types of university librarians does not vary in their responses to the statement 'KM can be practiced in academic libraries'.

3.3 University Librarians' Understanding on KM

Regarding the statement 'KM can be practiced by library and information science professionals in the organisations', a majority of the respondents ($\bar{x}$ =3.94) endorsed this statement. The respondents from private universities scored better ($\bar{x}$ =4.75), followed by central Universities ($\bar{x}$ =4.31), deemed universities ($\bar{x}$ =3.80), and state universities ($\bar{x}$ =3.60). However, the F value presented in Table 3, suggest that the mean variation is statistically insignificant. In other words, the librarians from different types of universities don't vary in their responses to the statement on 'KM can be practiced by LIS professionals in the organisations'.

With regard to the statement 'Knowledge sharing and learning are valued, and it is the culture in my organisation' a majority of the respondents ($\bar{x}$ =3.80) endorsed this statement.

With regard to the statement 'Knowledge sharing and learning are valued and, it is the culture in my library', a large majority of the respondents ($\bar{x}$ =3.94)

Table 3. University librarians' understanding on KM

KM statements		N	Mean	Std. deviation	F value (d.f.=3,49)	P
KM can be practiced by LIS professionals	State	25	3.60	1.118		
	Central	16	4.31	.793		
	Deemed	5	3.80	1.095	2.670	0.059
	Private	4	4.75	.500		
	Total	50	3.94	1.038		
Knowledge sharing and learning is the organisations' culture	State	25	3.64	1.150		
	Central	16	4.00	1.095	.939	0.429
	Deemed	5	3.40	1.949		
	Private	4	4.50	.577		
	Total	50	3.80	1.195		
Knowledge sharing and learning is culture in library	State	25	3.92	.909		
	Central	16	3.75	1.528	.590	0.625
	Deemed	5	4.20	.447		
	Private	4	4.50	.577		
	Total	50	3.94	1.096		

endorsed this statement. The respondents from Private universities scored better ($\bar{x}$ =4.50), followed by deemed Universities ($\bar{x}$ =4.20), state universities ($\bar{x}$ =3.92), and central universities ($\bar{x}$ =3.75). However, the F value presented in the Table 3, suggest that the mean variation is statistically insignificant. In other words, the librarians from different types of universities do not vary in their responses to the statement that 'knowledge sharing and learning are valued and it is the culture in my library'.

4. MICRO-LEVEL TESTING OF HYPOTHESES AND DISCUSSIONS

The data in Tables 4 reveal the level of understanding and knowledge on KM by the university librarians in India.

Hypothesis 2

'University librarians in India possess adequate knowledge and understanding on knowledge management'

4.1 Level of Understanding of KM Vs Librarians of Types of Universities

From the data in the Table 4, it can be observed that majority (70.0 %) of the university librarians of all types possess high level of understanding on KM, which in fact, is a prerequisite for implementation of KM in the institutions or libraries. It is, further, observed that only a small section, i.e., little more than one fourth of the university librarians (28.0 %) possess average or medium level of understanding or knowledge on KM. However, negligible extent (2.0 %) of the university librarians possess low level of understanding or knowledge on KM. Further, a large section of the state and central university librarians among other types of university libraries were found possessing high level knowledge or understanding on KM. All the respondents from private universities (100.0 %) possess high level of understanding on KM. The results (mean values) pertaining to first hypothesis is presented in the following table 4.

4.2 Mean and Standard Deviation values of Librarians Vs KM Understanding

Table 5 and its representation in graph, shows that the data in mean values on understanding of KM are in agreement among different types of university libraries. The mean value of state university librarians' understanding on KM is 2.68 out of 4.00 and standard deviation is 0.48. Similarly, the mean value of central universities librarians understanding on KM is 2.63 and standard deviation is 0.62, the mean value of deemed universities librarians understanding on KM is 2.60 and standard deviation is 0.55 and the mean value of private universities librarians understanding on KM is 3.00 and standard deviation is 0.00.

Table 5. Mean and standard deviation values of librarians Vs KM understanding

Type of university	KM understanding by the university librarians		
	N	Mean	SD
State	25	2.68	0.476
Central	16	2.63	0.619
Deemed	5	2.60	0.548
Private	4	3.00	0.000
Total	50	2.68	0.513

Table 4. Level of understanding KM verses librarians of types of universities

Type of universities		Level of understanding			Total
		Low	Medium	High	
State	Count	0	8	17	25
	% within University	0.0 %	32.0 %	68.0 %	100.0 %
	% within Level	0.0 %	57.1 %	48.6 %	50.0 %
	% of Total	0.0 %	16.0 %	34.0 %	50.0 %
Central	Count	1	4	11	16
	% within University	6.3 %	25.0 %	68.8 %	100.0 %
	% within Level	100.0 %	28.6 %	31.4 %	32.0 %
	% of Total	2.0 %	8.0 %	22.0 %	32.0 %
Deemed	Count	0	2	3	5
	% within University	0.0 %	40.0 %	60.0 %	100.0 %
	% within Level	0.0 %	14.3 %	8.6 %	10.0 %
	% of Total	0.0 %	4.0 %	6.0 %	10.0 %
Private	Count	0	0	4	4
	% within University	0.0 %	0.0 %	100.0 %	100.0 %
	% within Level	0.0 %	0.0 %	11.4 %	8.0 %
	% of Total	0.0 %	0.0 %	8.0 %	8.0 %
Total	Count	1	14	35	50
	% within University	2.0 %	28.0 %	70.0 %	100.0 %
	% within Level	100.0 %	100.0 %	100.0 %	100.0 %
	% of Total	2.0 %	28.0 %	70.0 %	100.0 %

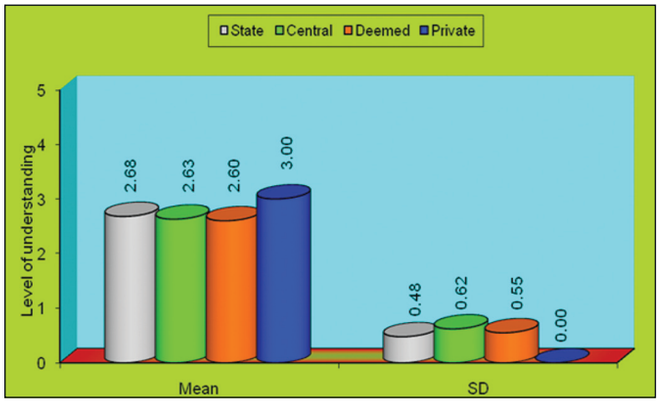

Figure 1. Mean and standard deviation values of university librarians are KM understanding

4.3 ANOVA Results

Table 6 shows the ANOVA results of Indian university librarians on their understanding or knowledge on KM. The calculated F value is 0.606 and the tabulated F value is 2.76 (p=0.614) with n1 = 3 and n2 = 46. Since the calculated F value is lower than the tabulated F value at 0.05 level of significance, the deviation in the mean value of the four groups are not significant. Hence, the hypothesis "University librarians in India have high level of understanding and knowledge on Knowledge Management" is accepted. It also signifies that there is no variance on the understanding of KM by the different types of university librarians such as, state, central, private or deemed universities. In an earlier study made by Nazim & Mukherjee[3] suggest that the term 'knowledge management' is familiar to most of the library professionals but the ways of knowing and degrees of their understanding are varied. They focused primarily on management of explicit knowledge and their roles were perceived as basic information management activities.

Table 6. ANOVA results

Frustration levels	d.f.	Sum of squares	Mean square	F	Sig.
Between groups	3	0.490	0.163	0.606	0.614
Within groups	46	12.390	0.269		
Total	49	12.880			

Hypothesis 3- Librarians Perception on Knowledge Management (Mean Values)

Further, to find out the understanding of KM by the university librarians, it was hypothesised that "knowledge management is an information technology (IT) intensive activity and different from information Management". The data obtained in this regard (i.e., the mean scores of the responses) are presented in table 7, with the measure as low mean value is of high rank.

Table 7 tries to analyse the understanding/perception of all types of university librarians on KM in the decreasing order: KM is information-based ($\bar{x}$ =1.48), followed by technology-based ($\bar{x}$ =2.10), and lastly it was culture and management-based activity ($\bar{x}$ =2.30). The low mean value is of high rank. Hypothesis-2 'KM is more of information technology-intensive activity and different from information management is rejected, as observed from the university librarians' perception.

Hypothesis 4-University Librarians' Understanding on Trained Manpower for KM

Table 8 indicates that large section (Mean=2.94) of all types of university librarians have endorsed the statement that institutions do not have the qualified and IT trained manpower, hence constrained to implement KM in libraries. Further, the F value suggests that the mean variation among different types of universities is statistically insignificant. This finding proves the hypothesis No.3 "Due to the non-availability of required library staff with IT skills and training, KM is not practiced in majority of the university libraries in india".

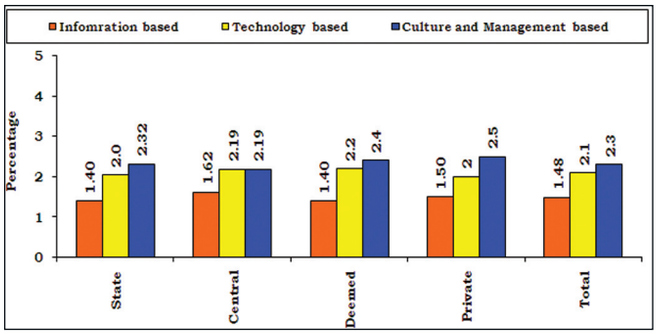

Figure 2. Librarians' perception on knowledge management.

5. CONCLUSIONS

Knowledge management, though practiced initially in

Table 7. Librarians perception on knowledge management (mean values)

Type of university	Information-based	Rank	Technology-based	Rank	Culture and management based	Rank
State	1.40	1	2.04	2	2.32	2
Central	1.62	3	2.19	3	2.19	1
Deemed	1.40	1	2.20	4	2.40	3
Private	1.50	2	2.00	1	2.50	4
Total	1.48	1	2.10	2	2.30	3

Table 8. University librarians understanding on trained manpower for KM

KM statement		N	Mean	Std. deviation	F-value (d.f.=3,49)	P=
Non availability of qualified and IT trained manpower hence KM cannot be implemented.	State	25	3.24	1.128	1.308	.283
	Central	16	2.69	1.537		
	Deemed	5	3.00	1.414		
	Private	4	2.00	1.414		
	Total	50	2.94	1.331		

the corporate business sector, it is now gaining importance for implementation in service sectors such as, healthcare, academic and research institutions. Academic librarians have been showing inclination for KM systems implementation in their institutions by virtue of possessing domain skills of information organisation and management, considering knowledge management as an extension of information management. It is observed from the study that the university librarians of all types viz., central, state, deemed, and private possess adequate knowledge and understanding on KM, its process, implementation, and advantages. The university librarians perceive KM as more information intensive activity than IT-intensive activity and hence, it can be practiced by them in the academic institutions or academic libraries. University librarians in India are quite aware of KM and its advantages to the academic institutions or libraries in furthering academic, research and training activities and also in delivering effective information services to their stakeholders. All types of university librarians felt the need for qualified and trained manpower in IT, to implement KM in libraries.

ACKNOWLEDGEMENTS

This paper is an outcome of the research carried out by the author as 'ICSSR senior fellow' (2013-2015). The author acknowledges the support of ICSSR, New Delhi for granting the fellowship to conduct the research.

REFERENCES

1. Jawadekar, Waman S. Knowledge management: Text and cases. Tata Mcgraw Hill, New Delhi, 2012, 62-72.
2. Rowley, Jennifer. Is higher education ready for knowledge management? *The Inter. J. of Edu. Manag.,* 2000, **14**(7), 325-33.
3. Nazim, Mohammad & Mukherjee, Bhaskar. Implementing knowledge management in indian academic libraries. *J. of Know. Manag. Pract.*, 2011, **12**(3).

Contributor

Dr S. Sudarshan Rao is presently the UGC Emeritus Fellow and formerly the ICSSR Senior Fellow. He was Professor, Head and Chairman Board of Studies, Dept. of Library and Information Science, Osmania University, Hyderabad (India). He had put in 25 years of service as faculty member at Osmania University, Hyderabad, 8 years as Librarian in various libraries, and 28 years of research experience. He held various administrative positions at the Osmania University, such as Principal, University College of Arts and Social Sciences. He has edited 16 monographs and published 72 articles in national and international professional journals and conference proceedings. His interested areas of work include: Information retrieval systems; management of e-resources; open access resources, etc. He is the recipient of *Parvathaneni Gangadhara Rao Memorial Award, 2009; IATLIS-Motivale Best LIS Teacher Award, 2010; and Govt. of Andhra Pradesh Meritorious Teacher Award, 2010.*