Prospects for Continuing Professional Education for LIS Professionals in Health Science College Libraries of Dakshina Kannada and Udupi Districts

Chandrashekhar D.1, Mahesh V. Mudhol²

Abstract

The study attempts to find out whether the development of the ICT skills has any influence on the informal needs in the digital era, the awareness of library professional activities, educational and their skills in handling the new technologies. Out of 68 Institution, 153 were duly filled Questionnaire were received. The investigator attempted to make a study of the Prospects for continuing professional education for LIS professionals in health science college libraries of Dakshina Kannada and Udupi districts.

Keywords: ICT Skills; Developing Technology Skills; Professional Development Programmes.

Introduction

The training programmes can be organized in different methods. Training in the health science associations should include the use of latest information technologies relevant to the library and information science profession. Some of the associations included those on Web design, management of electronic resources and digitization of materials, which would increase the visibility of conferences, paper publications/research, special lectures etc. Attending conferences will definitely provide knowledge generated during discussion of the seminars / conferences and during social networking environments. Interactions with librarians would get ideas about the new developments, which are taking place in their respective libraries from library automation and its problems, digital library development activities, institutional development activities and use of

Author's Affiliation: ¹Librarian, NGSM Institute of Pharmaceutical Sciences, Nitte University, Paneer, Deralakatte, Mangaluru, Karnataka 575018, India. & Research Scholar, Mangalore University. ²Retrd. Professor & Chairman, Dept. of Lib & Info. Sc. Mangalore University, Mangalagangothri, Mangalore, Karnataka 574199, India.

Reprint's Request: Mahesh V. Mudhol, Retrd. Professor & Chairman, Dept. of Lib & Info. Sc., Mangalore University, Mangalagangothri, Mangalore, Karnataka 574199, India. E-mail: maheshmudhol@yahoo.com

Received on 15.01.2018, Accepted on 02.04.2018

different types of software's from open source to purchased ones. Also arrangements of the staff meetings, open lectures and public events, would also invite topics for discussion during that time would be high value.

The terms skills, knowledge, competencies and such other terms are used synonymously in this study. These terms differ only slightly in meaning from one another. Specifically, 'Skills' refers to do something well, arising from talent, training or practice. The 'Knowledge' refers to acquaintance with facts, truths, profession or with a particular subject or branch of learning. The 'Competence' refers to the quality or state of having sufficient skills, knowledge and requirements to do a certain job.

Review of Literature

Adanu (2007) reported the research carried out among professional librarians in the five state-owned university libraries in Ghana. The results of the survey using questionnaire and interview show that the library environment in the state-owned universities was supportive largely of CPD. The study reveals that the professional librarian's involvement in CPD was a shared responsibility of the library and the individual. The author stresses the need for CPD and workplace learning to meet the challenges and changes faced by the library profession, due to the developments in ICT.

Alemna (1998) pointed out the education and training needs of future librarians in Ghana. He assumed that both short- and long-term training programmes must develop based on the assessed needed skills-actual and potential.

Guha (2006) presents the opportunities that Digital Learning Environments has put forward for teaching and learning. Focusing on a particular aspect of professional development i.e., continuing professional education (CPE) in the light of Information and communication technology (ICT), it also presents an open access Continuing Education Virtual Classroom, developed to provide a continuing professional education platform to LIS professionals in India.

Kavulya (2007) explained how to assess the status of the job market for library and information science (LIS) professionals in Kenya and the adequacy of current curricula and training resources in LIS training institutions in the country and secondly to identify the areas of training and critical IT skills required by LIS professionals in relation to current job market and performance requirements.

Srivastava and Srivastava (2004) surveyed in Jaipur the opportunities available for the professional development of librarians and their satisfaction level. The results reveal that the librarians need opportunities for higher education for attending conferences and are mostly ignorant of the developments in information technology. Most librarians are dissatisfied with their job and suggest that the authorities should encourage the library professionals to participate in professional development activities and provide opportunities for higher education.

Objective of the Study

- To identify the level of developing technology skills of the library professionals.
- To recommend PDP is improving the knowledge/ skills of library professionals.
- To access the ICT competencies of the library professionals with a specific focus on contribution of the publications.

Scope and Limitation of the Study

The study includes employed library professionals of the health science library professionals of the Dakshina Kannada and Udupi districts covered in the survey. The study considered the college offering health science courses related to Medical, Dental, Nursing, Ayurveda, Pharmaceutical,

Physiotherapy, Speech and Hearing disciplines. Of the 68 Institutions, 4 Institution have a common central library, hence the study purpose questionnaire was distributed to Medical/Dental, Nursing and Allied Sciences (Pharmacy, Physiotherapy, Ayurveda) and composite Libraries (Father Muller Charitable Institutions Mangalore, Manipal University, Nitte (Deemed to be University) Mangalore, Yennopoya (Deemed to be University) Mangalore.

Methodology

Keeping in view the above objectives, structured questionnaire was administered to collect the details about the professional developing skills of respondents towards the searching of the information resources. Totally, 175 Questionnaires were administered, only 153 filled in were Questionnaires returned making a moderate response rate of 87.43% which adequate for the analysis. Simple frequencies counting and percentages were used in reporting the findings.

Result and Discussion

Distribution of the Professionals Based on their Gender

The distribution of the respondents according to their gender is depicted in Table 1. This information was collected to study the demographic factor influencing motivation and performance. Of the 153 respondents, a majority 111 (72.5%) of the respondents were female and 42 (27.5%) of the respondents were male. The table also reveals that the highest female represents 52 (77.6%) is from Nursing/Allied Sciences and lowest female representation 39 is from Medical/Dental. Among the male respondents, the highest representation 15 (22.4%) was from Nursing/Allied Sciences and the lowest representation 13 (27.7%) was from Composite Libraries.

Qualification wise Distribution of Respondents

Table 2 shows that designation wise detail of library professionals based on their qualification. It is seen that 70 (45.8%) of the respondents with an M.LISc degree. 53 (34.6%) is from the respondents have a DLISc. Among the different Colleges, 26 (66.7%) in the Medical/Dental colleges have a Post Graduate Degree whereas only 1 (1.5%) respondent of Nursing/ Allied Science is a Ph.D. degree in Library Science.

Table 1: Gender wise Distribution of Respondents

Gender	Medical/Dental	Institution Nursing/Allied Science	Composite Libraries	Total
Male	14(35.9)	15(22.4)	13(27.5)	42 (27.5)
Female	25(64.1)	52(77.6)	34(72.3)	111(72.5)
Total	39(100)	67(100)	47(100)	153(100)

Note: Numbers given in the parenthesis represents the percentage

Table 2: Qualification wise Distribution of Respondents

Qualification		Institution		Total
	Medical/Dental	Nursing/Allied Sciences	Composite Libraries	
Ph.D	1(2.6)	1 (1.5)	4(8.5)	6(3.9)
M.Phil	1(2.6)	2(3.0)	1(2.1)	4(2.6)
M.LISc	26(66.7)	26(38.8)	18(38.3)	70(45.8)
B.LSc.	3(7.7)	11(16.4)	6(12.8)	20(13.1)
D.LISc	8(20.5)	27(40.3)	18(38.3)	53(34.6)

Note: Numbers given in the parenthesis represents the percentage

Table 3: Designation-wise Distributions of Respondents

Designation	Designation Institution			
	Medical/Dental	Nursing/Allied Sciences	Composite Libraries	
Librarian	9(23.1)	27(40.3)	8(17.0)	44(28.8)
Deputy Librarian	6(15.4)	2(3.0)	1(2.1)	9(5.9)
Asst. Librarian	17(43.6)	23(34.3)	18(38.3)	58(37.9)
Library Asst.	7(17.9)	15(22.4)	20(42.6)	42(27.5)

Note: Numbers given in the parenthesis represents the percentage

Table 4: Choice of the library Professions

Experience		Institution		Total
•	Medical/Dental	Nursing/Allied Sciences	Composite Libraries	
It was one of the best professions	24(61.5)	40 (59.7)	35(74.5)	99(64.7)
It was accidental	14(35.9)	19(28.4)	16(34.0)	49(32.0)
Highly remunerative	7(17.9)	5(7.5)	14(29.8)	26(17.0)
Better status and most respectable job	16(41.0)	21(31.3)	21(44.7)	58(37.9)
Admiration & love	13(33.3)	30(44.8)	25(53.2)	68(44.4)
For Livelihood	7(17.9)	24(35.8)	21(44.7)	52(34.0)

Note: Numbers given in the parenthesis represents the percentage

Distribution of the professionals based on their designation

Table 3 indicates that 58 (37.9%) respondents are designated as Asst. Librarian and nearly 9 (5.9%) library professionals designated as a Deputy Librarian. 20 (42.6%) respondents of composite Libraries are designated as a Library Asst. 1 (2.1%) professionals are designated as Deputy librarian in Composite Library.

Developing Technology skills for library professionals

• The Choice of the library Professionals

To some extent, the work interests of the library professionals affect the development of professional

skills. Further, the working interest is concerned with the choice of librarianship as their profession. Because, there are various reasons to join the librarianship such as better profession, better working conditions, and salary, to earn a livelihood, a profession with status and respect, ideal for people with admiration and love for books, library, and such others

From the result of table 4, it can be observed that out of 153 professionals, 99 (64.7%) professionals felt that it was one of the best profession when compared to others, 68 (44.4%) professionals felt that they have chosen it for their admiration and love for the library profession, 58 (37.9%) professionals felt

that it is a better status and most respectable job in the society, 52 (34.0%) professionals stated that they have chosen the profession just to earn livelihood, 49 (32.0%) professionals expressed that it was a mere accident that they joined the library profession, 26 (17.0%) professionals felt that they can better remunerative.

It is observed from the responses given by different professionals covered in the study that majority of the professionals joined this profession is one of the best profession compared to others and the remaining factors are mixed and varied.

• Institution is deputing to attended the professional development programme

In the table 5 out of total 153 professionals, 101 (66.0%) professionals are deputed to training programme and 52 (34.0%) professionals are not deputed to the training programme. Among 101 (66.0%) professionals, those who are deputed to the

training programme, 30 (76.9%) are medical/dental library professionals, 36 (53.7%) are Nursing/Allied sciences and 35 (74.5%) are composite library professionals.

• Periodicity of deputation of the professional development programme

Of the total professionals 153, only 101 (66.0%) professionals are deputed to attend the training programmes. Only 53 (52.5%) professionals are deputed to attend the training programmes, some of the managements are deputing library professionals to attend the programme once in a year 28 (27.7%) of professionals are composite library professionals are attend the training programme, 3 (3.0%) of library professionals are deputed to attend the training programmes twice in a year. Once in two years, 6 (5.9%) professionals are deputed to attend the training programmes. Of all 11 (10.9%) of library professionals, those who are deputed t attend the training programmes once in 2 years.

Table 5: Attending the professional development programme

PDP	Medical/Dental	Institution Nursing/Allied Sciences	Composite Libraries	Total	
Deputing	30(76.9)	36 (53.7)	35(74.5)	101(66.0)	
Not Deputing	9(23.1)	31(46.3)	12(25.5)	52(34.0)	

Note: Numbers given in the parenthesis represents the percentage

Table 6: Deputation of the professional development programme

Periodicity	Institution			
	Medical/Dental	Nursing/Allied Sciences	Composite Libraries	
As & when I wish to attend	17(56.7)	17 (47.2)	19(54.3)	53(52.5)
Once in a year	11(36.7)	6(16.7)	11(31.4)	28(27.7)
Twice in a Year	1(3.3)	1(2.8)	1(2.9)	3(3.0)
Once in two years	0(0)	4(11.1)	2(5.7)	6(5.9)
Once in a period more than two years	1(3.3)	8(22.2)	2(5.7)	11(10.9)

Note: Numbers given in the parenthesis represents the percentage

Table 7: Benefits from the institution

	Medical/Dental	Institution Nursing/Allied Sciences	Composite Libraries	Total
Special leave to attend the conference, seminar etc	28(71.8)	37(55.2)	38(80.9)	103(67.3)
TA/DA for attending conference	17(43.6)	30(44.8)	38(80.9)	85(55.6)
Promoted as per govt. norms applicable to the faculty	7(17.9)	7(10.4)	8(17.0)	22(14.4)
Representation in academic and other committees	7(17.9)	4(6.0)	11(23.4)	22(14.4)
Voting rights in the University senate election	14(35.9)	17(25.4)	2(4.3)	33(21.6)

Note: Numbers given in the parenthesis represents the percentage

• Benefits from the institution to the library professionals

The health library professionals were asked to indicate the benefits from the institution to the library professionals and the result are shown in the table 7. It was found that 103 (67.3%) special leave to attend the conference, seminar etc. 85 (55.6%) the institution is proving TA/DA for attending conference to the library professionals.

• Reason for attending Professional development program

The health library professionals were asked to

indicate the reason of attending professional development programme and the result are shown in the table 8. It was found that 122 (79.7%) of the library professionals attend PDP to accruing new skills and 108 (70.6%) to update knowledge or basic education. 86 (56.2%) of the professionals indicate that they get trained in the latest technologies. 85 (55.6%) preferred to attend PDP to improve library services.

Mandatory for promotion was indicated as one reason to participate in PDP by 25 (16.3%) of library professionals. 81 (52.9%) professionals pointed out that PDP is necessary to present article articles in the seminars.

Table 8: Reason for attending Professional development program

PDP		Institution		Total
	Medical/Dental	Nursing/Allied Sciences	Composite Libraries	
To acquire new skills	34(87.2)	46(68.7)	42(89.4)	122(79.7)
To update knowledge or basic education	34(87.2)	36(53.7)	38(80.9)	108(70.6)
To get trained in the latest technologies	28(71.8)	30(44.8)	28(59.6)	86(56.2)
To improve library services	32(82.1)	28(41.8)	25(53.2)	85(55.6)
It is mandatory for promotion	10(25.6)	13(19.4)	2(4.3)	25(16.3)
It helps to present articles in the seminars	23(59.0)	33(49.3)	25(53.2)	81(52.9)

Note: Numbers given in the parenthesis represents the percentage

Table 9: Attended training and development programme

Training and Development	Institution	None	1-5	6-10	11-16	above	Total
Refreshers Course	Medical/Dental	32(82.1)	7(17.9)	0(0)	0(0)	0(0)	39
	Nursing/Allied sciences	61(91.0)	6(9.0)	0(0)	0(0)	0(0)	67
	Composite Libraries	43(91.5)	4(8.5)	0(0)	0(0)	0(0)	47
	Total	136(88.9)	17(11.1)	0(0)	0(0)	0(0)	153
Orientation Program	Medical/Dental	18(46.2)	20(51.3)	1(2.6)	0(0)	0(0)	39
	Nursing/Allied sciences	58(86.6)	9(13.4)	0(0)	0(0)	0(0)	67
	Composite Libraries	36(76.6)	10(21.3)	1(2.1)	0(0)	0(0)	47
	Total	112(73.2)	39(25.5)	2(1.3)	0(0)	0(0)	153
Workshops/training program	Medical/Dental	16(41.0)	15(38.5)	5(12.8)	2(5.1)	1(2.6)	39
	Nursing/Allied sciences	45(67.2)	18(26.9)	3(4.5)	1(1.5)	0(0)	67
	Composite Libraries	20(42.6)	23(48.9)	2(4.3)	1(2.1)	1(2.1)	47
	Total	81(52.9)	56(36.6)	10(6.5)	4(2.6)	2(1.3)	153
Short term course	Medical/Dental	33(84.6)	5(12.8)	1(2.6)	0(0)	0(0)	39
	Nursing/Allied sciences	63(94.0)	4(6.0)	0(0)	0(0)	0(0)	67
	Composite Libraries	45(95.7)	2(4.3)	0(0)	0(0)	0(0)	47
	Total	141(92.2)	11(7.2)	1(0.7)	0(0)	(0)	153
Seminar, conference, symposia	Medical/Dental	19(48.7)	12(30.8)	1(2.6)	5(12.8)	2(5.1)	39
, J	Nursing/Allied sciences	47(70.1)	16(23.9)	2(3.0)	1(1.5)	1(1.5)	67
	Composite Libraries	24(51.1)	18(38.3)	0(0)	4(8.5)	1(2.1)	47
	Total	90(58.8)	46(30.1)	3(2.0)	10(6.5)	4(2.6)	153

Note: Numbers given in the parenthesis represents the percentage

• Attended training and development programme

The library profession is a multidimensional task. The library professionals work like knowledge disseminators, information specialists, documentation officers, knowledge managers, information helpers and information providers. The library professionals must able to satisfy the end users. In this information era, the professionals must be able to provide pinpointed right information at right time to their users, especially in the health science college libraries. Hence, to provide the latest information, the applications of latest technology, the library professionals need training and development programmes. In this regard, a question was asked whether you have attended any training and development programme or not. The following table explains in their service period have you attended any training and development programme.

The table 9 reveals that the health science library professionals were asked to whether they have attended the training and development programmes in their service period, out of 153 health science library professionals only 17 (11.1%) are attended to the refresher course. 39 (25.5%) orientation programme, 56 (36.6%) have attended 1-5 times to the workshop was organized by the organization.

10 (6.5%) have attended 6-10 times to the workshop, 4 (2.6%) 11-16 time to the workshop, 2 (1.3%) library professionals have attended more than 16 times to the workshop. 46 (30.1%) have attended 1-5 times to the seminars were organized by the organization, 3 (2.0%) have attended 6-10 times, 10 (6.5%) have attended 11-16 time 4 (2.6%) library professionals have attended more than 16 times to the seminars

• Professional contribution of the library professional

The publication patterns of health science library professionals are evaluated by analyzing the number of publication in Journals, Book/Book chapter, Conference proceedings etc. The table 10 shows that the trends in a publication or the productivity of different categories of library professionals, only 4 (2.6%) contributed 1-5 publication in Books/Book chapters. Only 14 (9.2%) professionals published research papers in research journals. The table reveals that out of 153 professionals, only 17 (11.1%) professionals research papers are published less than 5 times in conference, 3 (2.0%) have published papers 6-10 and 11-16 times in conference, among those who published papers more than 16 times are 2 (1.3%). Only 17 (11.1%) professionals research papers are presented less than 5 times in conference,

Table 10: Professional contributions

Publication work	Institution	None	1-5	6-10	11-16	above	Total
Books/Chapter	Medical/Dental	38(97.4)	1(2.6)	0(0)	0(0)	0(0)	39
	Nursing/Allied sciences	67(100)	0(0)	0(0)	0(0)	0(0)	67
	Composite Libraries	44(93.6)	3(6.4)	0(0)	0(0)	0(0)	47
	Total	149(97.4)	4(2.6)	0(0)	0(0)	0(0)	153
Research Papers published in Journal	Medical/Dental Nursing/Allied sciences Composite Libraries Total	35(89.7) 63(94.0) 40(85.1) 138(90.2)	4(10.3) 4(6.0) 6(12.8) 14(9.2)	0(0) 0(0) 0(0) 0(0)	0(0) 0(0) 0(0) 0(0)	0(0) 0(0) 1(2.1) 1(0.7)	39 67 47 153
Research paper published in conference proceedings	Medical/Dental	30(76.9)	7(17.9)	1(2.6)	1(2.6)	0(0)	39
	Nursing/Allied sciences	60(89.6)	6(9.0)	0(0)	1(1.5)	0(0)	67
	Composite Libraries	38(80.9)	4(8.5)	2(4.3)	1(2.1)	2(4.3)	47
	Total	128(83.7)	17(11.1)	3(2.0)	3(2.0)	2(1.3)	153
Research paper Presented in the conference	Medical/Dental	29(74.4)	5(12.8)	3(7.7)	2(5.1)	0(0)	39
	Nursing/Allied sciences	58(86.6)	8(11.9)	1(1.5)	0(0)	0(0)	67
	Composite Libraries	38(80.9)	4(8.5)	2(4.3)	1(2.1)	2(4.3)	47
	Total	125(81.7)	17(11.1)	6(3.9)	3(2.0)	2(1.3)	153
Special Lecture/ Training Program/ workshops	Medical/Dental Nursing/Allied sciences Composite Libraries Total	33(84.6) 65(97.0) 40(85.1) 138(90.2)	6(15.4) 2(3.0) 6(12.8) 14(9.2)	0(0) 0(0) 1(2.1) 1(0.7	0(0) 0(0) 0(0) 0(0)	0(0) 0(0) 0(0) 0(0)	39 67 47 153
Poster presentation	Medical/Dental	37(94.9)	2(5.1)	0(0)	0(0)	0(0)	39
	Nursing/Allied sciences	62(92.5)	5(7.5)	0(0)	0(0)	0(0)	67
	Composite Libraries	43(91.5)	4(8.5)	0(0)	0(0)	0(0)	47
	Total	142(92.8)	11(7.2)	0(0)	0(0)	0(0)	153

Note: Numbers given in the parenthesis represents the percentage

6 (3.9%) have presented papers 6-10 and 11-16 times in conference, among those who presented papers more than 16 times are 2 (1.3%) Only 14 (9.2%) professionals have given special lectures as resource persons less than 5 times. Among whom, 1 (0.7%) have given a special lecture as 6-10 times. The table reveals that 11 (7.2%) professionals have given a poster presentation at the conferences. 4 (2.6%) professionals contributed 1-5 publication in Books/ Book chapters. 14 (9.2%) library professionals for having contributed 1-5 research paper and published in research journals. only 17 (11.1%) professionals research papers are published less than 5 times in conference, 3 (2.0%) have published papers 11-16 times in conference, among those who published papers more than 16 times are 2 (1.3%) only 17 (11.1%) professionals research papers are presented less than 5 times in conference, 6 (3.9%) have presented papers 11-16 times in conference, among those who presented papers more than 16 times are 2 (1.3%) Only 14 (9.2%) professionals have given special lectures as resource persons less than 5 times. Among whom, 1 (0.7%) have given a special lecture as 6-10 times. The table reveals that 11 (7.2%) professionals have given a poster presentation at the conferences.

Findings

- 1. From the result of table 4, it can be observed that, 99 (64.7%) professionals felt that it was library professionals is one of the best profession.
- 2. It reveals that, 101 (66.0%) professionals are deputed to attend the training professional development programs and 52(34.0%) professionals are not deputed to the training program.
- 3. 101 (66.0%) professionals are deputed to attend the training programs. Only 53 (52.5% professionals are deputed to attend the training programs, whenever they wished to attend. Some of the managements are deputing once in a year 28 (27.7%), 3 (3.0%) twice in a year. Once in two years, 6 (5.9%), 11 (10.9%) once in 2 years,
- 4. It was found that 122 (79.7%) of the library professionals attend PDP to accruing new skills and 108 (70.6%) to update knowledge or basic education. 86 (56.2%) of the professionals indicate that they get trained in the latest technologies. 85 (55.6%) preferred to attend PDP to improve library services. Mandatory for promotion was indicated as one reason to participate in PDP by 25 (16.3%) of library professionals. 81 (52.9%) professionals pointed out that PDP is necessary to present article articles in the seminars.

- 5. 17 (11.1%) are attended 1-5 time to the refresher course, 39 (25.5%) of the library professionals have attended orientation program, 56 (36.6%) have attended to the workshop. 11 (7.2%) have attended to the short-term course 46 (30.1%) have attended to the seminars were organized by the organization.
- 6. 4 (2.6%) professionals published Book/Book chapters. Only 14 (9.2%) professionals published research papers in research journals. only 17 (11.1%) professionals research papers are published in conference, 14 (9.2%) professionals have given special lectures. 11 (7.2%) professionals have given a poster presentation in the conferences.
- 7. 4 (2.6%) professionals contributed the Books/Book chapters, Only 14 (9.2%) professionals published research papers in research journals, 17 (11.1%) professionals research papers are published and presented in conference, 14 (9.2%) professionals have given special lectures as resource persons. 11 (7.2%) professionals have given a poster presentation in the conferences.

Suggestion and Conclusion

After the investigation of developing technology skills of the library professionals, it is observed that respondents of Health Science College libraries professionals of Dakshina Kannada and Udupi districts are prefer using the ICT skills in the library. They perceived that ICT is more knowledgeable, exhaustive, authoritarian and easy to use, and believed that knowledge and skills is essential ICT applications.

Majority of health science library professionals were using ICT mainly for developing technology skills and agreed that the professionals' attitude is the main reason to choose information on the ICT. It is, however, commendable that the health science college library professions have knowledgeable in various tools of the ICT applications. It is also praiseworthy to see that professional contribution is attended training and development programs, scientific paper publications, conference/training programs etc.

Reference

1. Adanu T.S, Continuing professional development (CPD) in state-owned university libraries in Ghana, Library Management, 2007;28(6/7):292-305.

- 2. Alemna, A.A, Education and training of the future librarian in Ghana, Librarian Career Development, 2007;6(1),3-6.
- 3. Anwar, M.A., & Al-Ansari, Developing working LIS professionals in the Gulf cooperation council countries: a study of the perception of dean and directors of academic libraries, The Electronic Library, 2002;20(3):231-240.
- 4. Guha, N., ICT for continuing professional education for LIS professionals. (2006).
- 5. Kattimani S.F. & Naik R.R. ICT skills of Library professionals working in engineering college of

- Karnataka, Kumbargoudar P. and Atik-ur-rahaman, S.M. (Eds.), Advances in Social Sciences, (Anu Books, Meerut) 2012.p.73-82.
- Kavulya Joseph. M. Training of library and information science (LIS) professionals in Kenya: A needs assessment. Library Review, 2007;56(3): 208-223.
- 7. Srivastava A. Opportunities for professional development of librarians: a study of the level of satisfaction among librarians of institutions of higher education in Jaipur. ILA Bulletin, 2004; 40(4):31-34.