Usage of electronic resources by librarians of Sri Lankan universities

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The study investigates the usage of the e-resources available through CONSAL (Consortium of Sri Lankan Academic Libraries) and other means for the LIS professionals of the Sri Lankan public universities. A structured questionnaire was used to gather data from 99 librarians working in the Sri Lankan public universities. Findings revealed that 65% frequently use open access material for their research, and the majority (33%) use them for their research, 60% believed that the available e-resources fulfilled their needs. Inability to access the databases from home, absence of some full text articles, lack of relevant material and lack of access to archival material were identified as common barriers to use the e-resources. The study recommends improving access from homes, adding more LIS material and increase training to cover as many LIS professionals to increase the usage. The study is limited to the usage of the e-resources by the Librarians during 2014 and 2015 after the formulation CONSAL.

Keywords: E-resources; University librarians; CONSAL; Sri Lanka

Introduction

The university librarians of Sri Lanka, realizing the problems related to escalating prices of scholarly journals, have made several attempts to form a consortium using a cost sharing model, but without much success. In 2011, another initiative was taken by the Standing Committee of Library and Information Science (SCOLIS) of the University Grants Commission (UGC) to formulate a consortium, using a centrally funded model. The primary objectives of this project were to increase access to scholarly journals in a cost-effective manner and to increase the research productivity of participating universities with increased access to high quality research publications. In January 2014, the consortium (Later named as the Consortium of Sri Lankan Academic Libraries – CONSAL) was started with five internationally reputed databases with access to 15 universities under the purview of the UGC. In addition to these databases, several universities continued to subscribe to a few specific databases for their special needs, utilizing their own funds, and the use of open access material was also continued.

Objectives of the study

- To identify the frequencies and purposes of using the available e-resources by the librarians in the Sri Lankan public universities;

- To learn about the training librarians have received in using the e-resources;

- To find out the satisfaction levels towards the available e-resources;

- To understand the changes in the information seeking patterns after the introduction of e-resources;

- To identify factors affecting the use of the databases; and

- To make appropriate recommendations to the UGC based on the findings.

Literature review

The review of related literature was limited to material published between 2000 and 2015, as any older research could be irrelevant due to rapid changes in the development of e-resources, infrastructure and related issues. Literature were searched using Google, Google Scholar and the commercial databases available through CONSAL, with a special emphasis on library professionals and students. Review of the literature showed that very little has been published related to LIS professionals or students although many papers have been published on professionals and students of other disciplines[1-5] as well as on academics of other disciplines[6-13].

An investigation on the perceptions of LIS professionals regarding the usage and satisfaction of the National Digital Library initiative of the Higher Education Commission in Pakistan[14,15] concluded that younger professionals show greater interest in the use of databases but the resources are underutilized but overall 68% were satisfied with the contents of the databases. Major problems identified as barriers to the use of e-resources are lack of training and online searching skills, absence of access to archival issues, low speed of Internet and power failures[15], and the researchers have recommended increased training, development of effective promotional strategies, and a feedback mechanism to increase usage[15]. A study on the National Digital Library in Pakistan[16] established that, the concept of digital library is still new in the country and the problems hindering the promotion of digital library are the lack of IT literacy, lack of funding, power failures, copyright issues, etc. They also pointed out that trained manpower, infrastructure, orientation, support in using and awareness programs are essential. However, none of these studies comment about the use of e-resources by the LIS professionals to satisfy their own teaching, learning and research needs.

A survey on the amount of web resources used in 95 papers published in the proceedings of the Society of Information Systems conference in 2005[17] established that out of 837 references, 34.88% are web resources. A similar survey[18] analyzing 2,935 bibliographic references / notes in 149 articles published in 24 issues of *Cataloguing and Classification Quarterly* from 1994-2004 (excluding some special issues) established that the number of articles using e-resources has increased from 4 in 1994 to 68 in 2004, number of e-resources cited also has increased from 2 in 1994 to 134 in 2004.

A study of the LIS research scholars and students in University of Delhi[19] found that 67% use e-resources for research and 52% use them to keep up-to-date but there is a clear need to increase subscriptions to more LIS material as 67% have commented that core journals are limited and 64% have commented that they need proper training for searching the journals. Ten issues varying from retrieval problems including slow loading (86%), limitations of core journals (67%), slow Internet connectivity (61%), lack of system speed (52%), difficulty in accessing full text (48%), to limited access to terminals (44%), and difficulty in finding relevant information (37%), were pointed out by the respondents. The study recommended subscription to more LIS resources, training and infrastructure development and better promotion and awareness programs.

LIS postgraduate students in the Makerere University library in Uganda was found to have a positive attitude towards the e-resources[20]. They used 13 databases and 72% have strongly agreed that the academic work would suffer without e-resources, but identified several issues which affect the usage; slow Internet connectivity (96% of the respondents), inadequate networked computers (64%), lack of access to low cost printers in the library (72%), advanced search strategies of most databases (60%), lack of awareness of most of the available resources (76%).

A study on LIS graduate students in Kuwait[21], found that the majority preferred journal articles, web pages and books but despite the availability of electronic resources and full text databases, 72% preferred print forms in contrast to 28% who preferred electronic resources. The researchers attribute this trend to lack of awareness and lack of competence.

In the Sri Lankan context, there is no evidence of any studies on the e-resource usage of librarians but two papers discuss[22,23] the e-resource usage of agriculture students and another two[24,25] have studied the e-resource usage of engineering students and faculty while another paper[26] studied the same of social science and humanities faculty. No studies have been carried out related to librarians.

Methodology

A structured questionnaire was developed with the support of already published research[27-31] and the observations of the researcher and was piloted in two university libraries. One hundred and ten librarians currently serving in the main and faculty libraries of the 15 public universities, were considered as the population, but eleven of them who were on long term leave and hence were excluded from the survey. The final population was therefore 99 librarians. The questionnaire was emailed to the respondents and the data were collected over two months, from 20 October to 20 December 2016 and SPSS (Ver. 22)

was used to analyse the data. Empirical data were complemented and triangulated by the experiences of the researcher as the co-coordinator of CONSAL and previously published material.

Findings

Profile of respondents

Out of the 99 who received the questionnaire, 48 (48.5%) responded from fourteen universities representing six seniority levels. The majority of the respondents (46%) belonged to Senior Assistant Librarian Grade II category and 71% of the respondents were female while 42% were in the age group of 39-48 years. Of the respondents, 22% did not reveal their age. Majority (75%)possessed a Masters Degree in LIS while 8% had PhDs. Primary language of the majority (81%) was Sinhala followed by Tamil (17%) and English (2%). Most of the respondents (71%) were attached to main libraries while 29% were from branch libraries. The highest number of publications are the conference papers contributed by the SAL IIs (Table I).

Frequency of e-resources usage

Eight resources were listed and the respondents were asked how often they use these for teaching, research or other purposes and they were specifically asked to think of their own use but not the use on

Table 1—Demographic, educational and other characteristics of the respondents

		L	%	DL	%	SALI	%	SALII	%	AL (M)	%)	AL	%	Total	%
Gender	Male	1	2	0	0	2	4	8	17	3	6	0	0	14	29
	Female	4	8	1	2	8	17	14	29	5	10	2	4	34	71
	Total	5	10	1	2	10	21	22	46	8	17	2	4	48	100
Age	29-38	0	0	0	0	0	0	3	6	6	13	2	4	11	23
	39-48	0	0	0	0	7	15	13	27	0	0	0	0	20	42
	49-58	3	6	1	2	1	2	1	2	0	0	0	0	6	13
	Total	3	6	1	2	8	17	17	35	6	13	2	4	37	78
Higher Education	Bachelors	0	0	0	0	0	0	0	0	4	8	2	4	6	13
	Masters	4	8	1	2	9	19	19	40	3	6	0	0	36	75
	Mphil	0	0	0	0	0	0	1	2	1	2	0	0	2	4
	PhD	1	2	0	0	1	2	2	4	0	0	0	0	4	8
	Total	5	10	1	2	10	21	22	46	8	17	2	4	48	100
Primary Language	Sinhala	4	8	1	2	7	15	19	40	6	13	2	4	39	81
	Tamil	1	2	0	0	2	4	3	6	2	4	0	0	8	17
	English	0	0	0	0	1	2	0	0	0	0	0	0	1	2
	Total	5	10	1	2	10	21	22	46	8	17	2	4	48	100
Type of Pub.	Conf. Papers	2	1	1	0	43	14	51	17	9	3	0	0	106	35
	Conf. Abstracts	17	6	0	0	14	5	35	12	24	8	2	1	92	31
	Articles (Other)	6	2	0	0	14	5	33	11	7	2	0	0	60	20
	Articles (Indexed)	2	1	0	0	10	3	6	2	4	1	0	0	22	7
	Books	4	1	0	0	3	1	3	1	3	1	0	0	13	4
	Other	3	1	0	0	0	0	0	0	0	0	2	1	5	2
	Reports	0	0	0	0	2	1	0	0	0	0	0	0	2	1
	Book Chapters	0	0	0	0	1	0	0	0	0	0	0	0	1	0
	Total	34	11	1	0	87	29	128	43	47	16	4	1	301	100

L - Librarian; DL - Deputy Librarian; SALI – Senior Asst. Librarian Gr. I; SALII - Senior Asst. Librarian Gr. II;
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behalf of the library users. They were offered six Likert-type options to mark their preferences and in the analysis, they were conflated into three categories; used frequently, used rarely and do not use. Findings established that, as a whole, Open Access resources (OA) are used frequently by the majority (65%) followed by Taylor and Francis (T & F) and Emerald (Em) (two UGC provided databases) by 56% each. Sage Research Methods Online (SRMO) is used frequently by 35%, Oxford University Press (OUP) by 33%, Wiley by 31%, resources provided through other sources i.e. INASP, WHO etc. Other by 23% and university-subscribed resources (US) by 21% (Table 2) Senior Assistant Librarians Gr. II (SALII) were the largest group of users of all resources. However, the findings proved that the majority still turn to open access material.

Purposes of usage

The respondents were asked to indicate the purpose for which they often use the given e-resources and six options were provided for them: for teaching, for their own postgraduate research, to support research (in general), to write professional material like books and articles, to supervise research and to keep up to date. The analysis established that, the resources are mainly used for research purposes; followed by postgraduate studies, and teaching. Usage for writing professional material and to keep up to date was low (Table 3).

Factors affecting the usage of e-resources

The study attempted to identify the factors which affect the usage of available e-reosurces by the librarians. Thirty factors were listed (with provision to indicate any other factors if the respondents had any) under 10 themes; Computer and Internet Facilities, electricity, access, training, trust, relevance, availability of time, search interface, motivation and other. Table 4 lists the 10 most commonly cited factors by the respondents as barriers for effective usage. The most often given reason was the Inability to access databases from home *(58%)*, and next five factors belong to relevance or content; absence of full text (52%), lack of relevant material in some databases (42%), lack of access to archival material (29%), lack of material related to Sri Lanka (29%) and lack of coverage of the respondents' subject (29%). Only 23% had an issue related to infrastructure; lack of computers in my library and 13% identified lack of training in using e-resources while 17% and 13% had personal issues like lack of time to search and absence of motivation from superiors (Table 4).

Discussion

The study established that the respondents use open access material more than the subscribed databases. Except T & F and Emerald, other available databases are used by less than 50% of the respondents. Their main concern was the inability to access the databases from home, unlike the slow internet connection and, lack of training and IT literacy identified as main reasons in the previous surveys[1,14,15,19,20]. The inability to access from home is because the access to databases under CONSAL as well as individual university-subscribed resources is provided through IP authentication which only recognizes the terminals connected to the university networks. Therefore, no

Table 2—Frequent usage of e-resources

Resource	Frq.	L	%	DL	%	SALI	%	SALII	%	AL(M)	%	AL	%	Total	%
OA	F	2	4	1	2	7	15	13	27	6	13	2	4	31	65
T & F	F	1	2	1	2	3	6	16	33	5	10	1	2	27	56
Em	F	2	4	1	2	8	17	12	25	2	4	2	4	27	56
SRMO	F	3	6	0	0	2	4	8	17	3	6	1	2	17	35
OUP	F	2	4	0	0	1	2	9	19	3	6	1	2	16	33
Wiley	F	1	2	0	0	2	4	10	21	2	4	0	0	15	31
Other	F	0	0	0	0	3	6	7	15	1	2	0	0	11	23
US	F	1	2	1	2	1	2	5	10	1	2	1	2	10	21

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Table 3—Purpose of usage

Resource	Purpose	L	%	DL	%	SALI	%	SALII	%	AL (M)	%	AL	%	Total	%
SRMO	Research	3	6	1	2	3	6	6	13	2	4	1	2	16	33
OUP	Research	1	2	1	2	3	6	6	13	3	6	1	2	15	31
OA	Research	2	4	0	0	4	8	5	10	2	4	1	2	14	29
WIley	Research	1	2	0	0	5	10	3	6	1	2	1	2	11	23
T&F	Research	1	2	1	2	4	8	2	4	1	2	1	2	10	21
SRMO	PG studies	1	2	0	0	3	6	2	4	3	6	0	0	9	19
Em	PG studies	1	2	0	0	3	6	2	4	2	4	1	2	9	19
Em	Research	2	4	0	0	2	4	3	6	1	2	1	2	9	19
OUP	PG studies	1	2	0	0	2	4	1	2	3	6	1	2	8	17
Wiley	PG studies	2	4	0	0	0	0	2	4	3	6	1	2	8	17
OA	Teaching	0	0	0	0	0	0	7	15	1	2	0	0	8	17
OUP	Teaching	1	2	0	0	0	0	5	10	1	2	0	0	7	15
T & F	PG studies	1	2	0	0	1	2	1	2	3	6	1	2	7	15
OA	PG studies	0	0	0	0	2	4	1	2	3	6	1	2	7	15
SRMO	Teaching	0	0	0	0	0	0	5	10	1	2	0	0	6	13
Wiley	Teaching	0	0	1	2	0	0	4	8	1	2	0	0	6	13
Em	Teaching	0	0	0	0	0	0	5	10	1	2	0	0	6	13
Em	Writing	1	2	0	0	1	2	4	8	0	0	0	0	6	13
US	Keep up to date	1	2	1	2	1	2	2	4	1	2	0	0	6	13

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Table 4—Factors affecting the use of e-resources

	Factors	L	%	DL	%	SALI	%	SALII	%	AL (M)	%	AL	%	Total	%
1.	Inability to access databases from home	3	6	0	0	5	10	14	29	4	8	2	4	28	58
2.	Absence of full text	4	8	1	2	3	6	10	21	6	13	1	2	25	52
3.	Lack of relevant material in some databases	0	0	0	0	3	6	13	27	4	8	0	0	20	42
4.	Lack of access to archival material	2	4	0	0	3	6	6	13	3	6	0	0	14	29
5.	Lack of material related to Sri Lanka	1	2	1	2	3	6	4	8	5	10	0	0	14	29
6.	Lack of overage of my subject	1	2	1	2	0	0	7	15	5	10	0	0	14	29
7.	Lack of computers in the library	1	2	0	0	2	4	4	8	3	6	1	2	11	23
8.	Lack of time to search for information	1	2	0	0	2	4	2	4	3	6	0	0	8	17
9.	lack of training in e-resources	0	0	0	0	0	0	3	6	3	6	0	0	6	13
10.	there is no motivation from superiors	1	2	0	0	1	2	3	6	1	2	0	0	6	13

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one can access the full text from their homes or smart phones. The 17% who commented that they do not get time to search also may face this issue as they are work. Since they cannot access the databases from their homes at leisure, the usage can be limited.

Secondly the respondents identified several factors related to the content; absence of full text, lack of relevant material in some databases, lack of access to archival material, lack of material related to Sri Lanka and lack of coverage of their subject. Observations proved that the databases are not equally accessible to all. Although the UGC provides five databases, not all universities have access to all five databases. The distribution of databases across the universities varies owing to the different prices of the database and the size of the user community in each university. For instance, SRMO is provided for all fifteen universities while Emerald is provided for fourteen universities, and T & F is provided only for the seven large universities. However, all universities have the searching and abstract viewing facility of all five databases through their own library home pages and a university which does not have access to a particular database can request full text material from a university which has access to that particular database. Accordingly, the librarians from those non-subscribing universities always have to depend on the librarians of the seven subscribing universities to obtain full text and T & F is the databases which contains the majority of the LIS journals. Emerald which includes 35 LIS titles is available for 14 universities, but only 17 of the LIS journals are included in the subscribed package. Only partial access (open access articles) is available for the other 18 titles. This confirms the barriers related to relevance and contents identified by the respondents.

The databases subscribed by the individual universities (in addition to what is provide through CONSAL) do not seem to help the librarians as only 21% have claimed that they use them frequently (Table II). Further analysis proved that these databases are related to the subjects taught in the universities and LIS is not covered by them. Only one database has LIS journals but that is only available in three universities, therefore not accessible directly to the majority.

Of the respondents, 13% claimed that lack of training is a barrier and the survey established that 58% have learnt to use the e-resources by themselves, while 23% have learnt through their universities and 19% have learnt from their friends. One respondent has commented that he/she would start any search for literature with Google as it is familiar and the searching is more convenient. CONSAL is only two years old and most of the resources and the publisher interfaces are still new to the librarians, despite the various training sessions offered by the publishers.

Conclusion

Based on the survey findings, it can be concluded that usage of the databases continues to be low and the highest usage is recorded from SAL II. Phi and Cramer's V tests proved there is no significant correlation between the number of publications by the respondents and usage (at .229), or between the university of employment and the usage (at .112). However, there was a significant correlation between the age and usage (at .921) and the designation and usage (at .885). The low usage could be attributed to the inability to access the resources from their homes when they can concentrate on professional reading leisurely away from routine work, limited time available for senior levels to use the resources, academic rigour of the type of publication output, and lack of LIS titles covered in the databases. Therefore, it is recommended to consider enabling access from homes, to increase the LIS content available through CONSAL to all university librarians and to encourage them to increase more scholarly publications. It is recommended to initiate a convenient document delivery method among CONSAL members for efficient access to full text articles by those who lack access to what is available through CONSAL.

Acknowledgement

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